Massachusetts Bay
Transportation Authority

Operations and Management Proposal

For the MBTA Commuter Rail Service

Submitted to Massachusetts Bay Transportation Authority in response to RFP N°. 159-12

Copy 1 of 39 Copies

Submitted by

Keolis
Commuter Services

Moving Further Together

Keolis Commuter Services

August 9, 2013

Mr. Gerald K. Kelley - First Deputy General Counsel
Massachusetts Bay Transportation Authority
77 Franklin Street - 4th Floor
Boston, MA 02110-1510

Dear Mr. Kelley:

On behalf of Keolis Commuter Services, LLC, I am pleased to submit to the MBTA our Proposal to operate and maintain the MBTA Commuter Rail Service, in response to MBTA RFP No. 159-12, Commuter Rail Procurement. Our Proposal is fully responsive to the RFP and contains our specific Plans, our Vision for the MBTA Service and our pledge of a transparent working relationship with the MBTA. As you will read in our Proposal, we have encapsulated our Plans, our Vision and our pledge under the theme **Moving Further Together.** Guided by that theme, we will:

- Institute a **Safety Culture** and engage every one of our employees in the campaign to make the MBTA Service the safest in America
- Implement a comprehensive **Customer Service/Satisfaction** program in which all of our employees **Think Like a Passenger** at all times
- Establish and maintain a fully **Transparent** relationship with the MBTA, one which enables you to know everything you need to know about *your* service at all times
- Through better, more comprehensive **employee training and job satisfaction,** bring about a **Cultural Change** in service performance and quality
- Provide our workforce with **innovative tools and programs** to increase and improve **employee productivity, asset utilization, cost effectiveness and service convenience**
- Establish a strong presence in **communities** served by MBTA trains and increase both DBE participation and the **diversity** of our workforce
- Work closely with the MBTA to reverse the disappointing ridership trends of the last decade and bring significant **ridership growth** to the service **within New England**

How we will fulfill the MBTA's Objectives listed in the RFP is described in the required Plans in our Proposal and summarized in the Executive Summary in Section 8 Management Plan. Beginning during Mobilization, we will not be content to just realize these Objectives. Rather, we will be working with you on an **Every Train, Every Day** basis to continuously improve your service and to exceed these Objectives. That is our commitment to the MBTA: in improving, growing and expanding the MBTA Service.

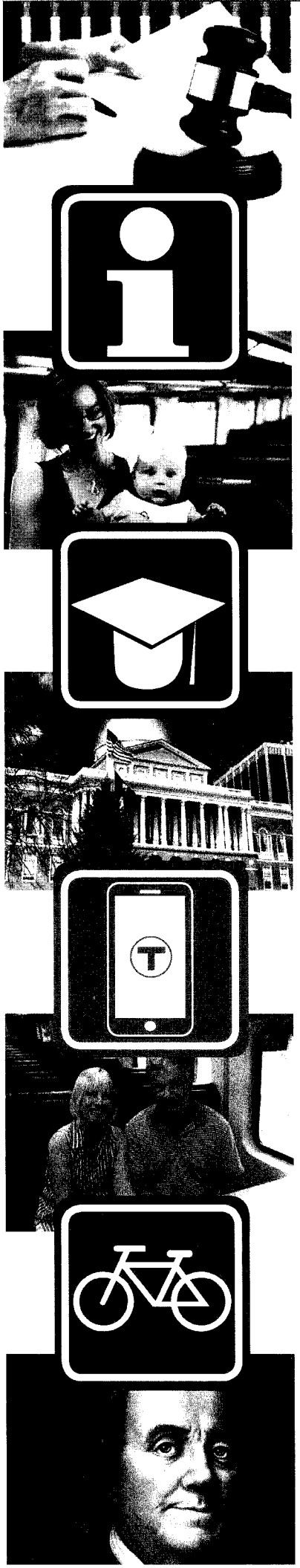
Pursuant to the requirements of the RFP, our single point of contact for all matters concerning this Proposal is: Mr. Steve H. Townsend, President, Keolis Commuter Services, 101 Federal Street, Suite 1900, Boston, MA 02110; Telephone: 617-261-8590; E-mail: stownsend@keolis.com

Thank you for the opportunity to submit our Proposal in response to MBTA RFP No. 159-12. We are ready to answer any of your questions and/or requests for clarifications or additional information.

Sincerely,

S Townsend.

Steve H. Townsend, President

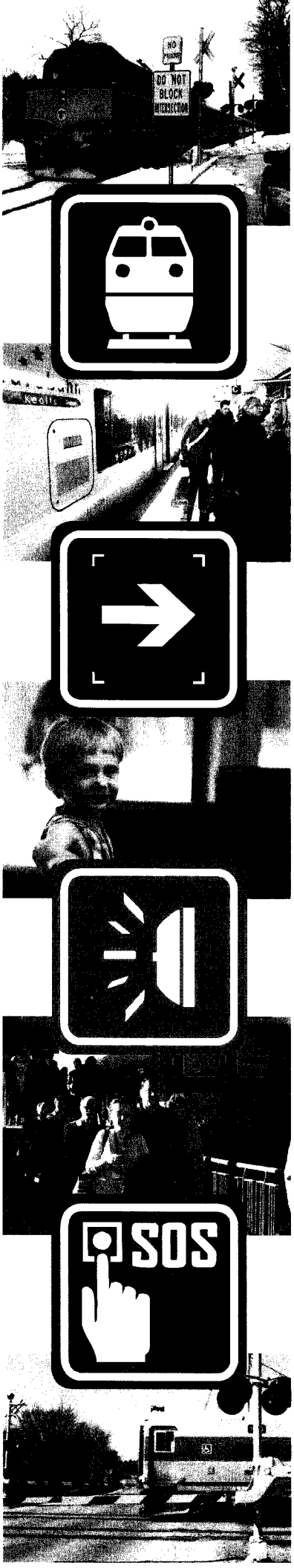


SECTION 1
Legal Pass/Fail
Evaluation Factor Information

SECTION 1 — LEGAL/PASS FAIL EVALUATION FACTOR INFORMATION

Contents

- Form of Proposal ..... Binder 2
- Form NS, Named Subcontractors and Suppliers ..... Binder 2
- Commonwealth of Massachusetts Charter of Foreign Corporation Certificate ..... Binder 2
- Power(s) of Attorney ..... Binder 2
- Organizational Conflict of Interest Disclosure ..... Binder 2
- Certification of Restrictions on Lobbying ..... Binder 2
- Certification Regarding Debarment; Suspension and Other Ineligibility and Voluntary Exclusion from Transactions Financed in Part by the U.S. Government ..... Binder 2
- Buy America Certification ..... Binder 2
- Affidavit of Non-Collusion ..... Binder 2
- Certification regarding Companies Doing Business with or in Northern Ireland ..... Binder 2
- Confidential Information Agreement ..... Binder 2
- Conflict of Interest Certification ..... Binder 2
- MBTA Retiree Certification ..... Binder 2
- Prohibit Use of Undocumented Workers Certification ..... Binder 2
- Right-of-Way Safety Training Requirements Certification ..... Binder 2
- Right-to-Know Law Certification ..... Binder 2
- Security Requirements Certification ..... Binder 2



SECTION 2
Safety
Evaluation Factor Information

SECTION 2 — SAFETY EVALUATION FACTOR INFORMATION

Contents

2. INTRODUCTION 2
I. Executive Summary 2
II. Our Understanding of the MBTA's Objectives for the Operator Safety Compliance Plan (OSCP) 3
III. Our Assessment of the Current Situation 4
IV. The Results We Will Deliver 4

2.A. SAFETY PLAN 6
Draft Safety Plan 6
Application of the Operator Safety Compliance Plan and Regulatory Compliance Program 11
Specific Elements of Our OSCP (as required by the RFP, ITP, Appendix B, Section B3.2) 12

2.B. Best Practices Support 17

APPENDICES ..... Binder 2
2-1 General Safety Policy
2-2 2012-2013 Keolis Group Rail Safety Review
2-3 KRSV Hazard Identification and Risk Assessment Program/Near Miss Report

2. INTRODUCTION

I. Executive Summary

As the commuter rail operator, we will ensure that the MBTA Service will become the safest commuter rail system in the U.S. **Moving Further Together** in the area of safety, for our passengers, employees and the communities served by the MBTA Service, will be more than a slogan: it will be a recognized attribute of the MBTA Service. We will achieve this goal by instilling a comprehensive safety culture throughout the organization and by implementing a detailed system safety program. Key elements of this program include the following:

- As our proposed candidate for the position of Director - Safety, Security, Emergency Preparedness and Response and Regulatory Compliance (Director - Safety and Security), Justin Vonashek combines safety and compliance experience from one of America's most highly-regarded commuter rail systems, Metra in Chicago. Mr. Vonashek served in important management roles in both the Safety and the Transportation Departments of Metra, which had the lowest employee reportable injury ratio of any major U.S. commuter rail system in 2012. He currently is the Director of Regulatory Compliance for Metra. Mr. Vonashek's complete resume and qualifications are contained in Section 8 Management Plan.
- Our corporate commitment to rail safety and general safety policy goes far beyond any emphasis on safety demonstrated in the MBTA Service in the past. Our Operator Safety Compliance Plan (OSCP) will be driven by compliance with safety and regulatory policies, procedures and accountability. As part of our OSCP, we will develop and implement a comprehensive plan tailored to the MBTA Service, compliant and consistent with both the MBTA's SSP and the pending requirements of 49 CFR Part 270, which is scheduled to be in effect prior to July 1, 2014. We will also promote and enhance total safety in the MBTA Service by bringing best-practice solutions to the service within the framework

of the OSCP, ensuring that this document becomes a daily procedures manual for our workforce. Hazard awareness, identification and prompt resolution; strict adherence to best operating practices, speed limits and signal indications; employee distraction and complacency; fatigue mitigation; training; roadway worker protection; and drug and alcohol abuse are all safety issues that apply to every aspect of the MBTA Service and that are points of emphasis throughout our approach to system safety.
- In addition to the Keolis commitment to rail safety and the creation of a safety culture wherever we operate passenger trains, SNCF has achieved over many decades one of the world's finest safety records, including over three decades of operating an extensive high speed intercity passenger rail service, at speeds in excess of 200 MPH, without a single serious accident or passenger fatality.
- Strict regulatory compliance will be achieved through greater awareness and understanding of both current and pending FRA regulations, including 49 CFR Part 270 System Safety Plan, the Fatigue Management Plan and 49 CFR Part 272, Critical Incident Stress Plan, the Notice of Proposed Rule Making (NPRM) for which was published in July, 2013.
- Our employees will be responsible for the development of and adherence to their own individual safety plans, which will include an emphasis on the safety of passengers under their care and responsibility.

- As part of our team, we will utilize the services of well-known and highly regarded safety firm Arthur D. Little (ADL), which already performs a great deal of this type of work for Keolis in the United Kingdom, France, Germany and Australia, to develop and oversee a program designed to establish a true safety culture within the commuter rail workforce. The training will include, but not be limited to, leadership in safety training, safety awareness training, hazard identification, development of key performance indicators and conduct of a series of branded safety campaigns.
- Applied in an integrated program, the combination of the expertise and experience of Justin Vonashek and his staff, the rail safety expertise of Arthur D. Little and the well-established corporate safety culture described in this plan will be the instruments of change management that will enforce and reinforce safety and security in every one of our activities on behalf of the MBTA.

In addition to being led by a highly-qualified candidate for Director - Safety and Security, a true safety culture must begin at the very top of an organization and dwell in every level of that organization. Keolis has had that kind of a safety culture in place in all of its passenger rail operations for decades, and will apply best practices developed in its other operations as operator of the MBTA Service.

II. Our Understanding of the MBTA's Objectives for the Operator Safety Compliance Plan (OSCP)

Safety represents a critical area for **Moving Further Together** with the MBTA, as we will apply our strengths in change management to improve the safety program for the MBTA Service to industry-leading levels. We will focus on all aspects in the area of safety: For the system, for the service, for our passengers, for our employees and for the communities which the MBTA trains serve. To accomplish this, we will bring together our exemplary track record in safety in other passenger systems we operate with a deeply experienced safety management team proposed for the MBTA Service and a partnership with ADL's leading safety training practice.

Our detailed OSCP addresses each of the MBTA's objectives for safety. These objectives, as stated in the RFP, include:

Our Results	Objectives — WE WILL:
To ensure that the Proposer has sufficient resources and programs to integrate safety in all management, training and work activities related to the scope of services.	• Bring an industry leading Director to the MBTA Service to lead our Safety program, to establish our safety culture and to ensure full regulatory compliance. • Augment these efforts through the application to the MBTA Service of the Keolis corporate safety culture and the outside expertise of Arthur D. Little (ADL). • Enlist the efforts of every employee, especially our operating employees who will be responsible for their individual safety plans, in the effort to make the MBTA Service the safest large commuter rail service in America within three years.
To ensure that the Proposers are fully prepared to handle safety incidents and to develop accident reduction plans in partnership with the MBTA and other stakeholders.	• Institute aggressive injury/accident reduction programs. • Through the governance of the Keolis General Safety Policy and SNCF programs/ policies for passenger and employee safety during rail operations, a rigorous Hazard Awareness/Hazard Identification program, the Keolis/Arthur D. Little programs and a comprehensive program of KPI's, ensure that these aggressive goals are achieved.
To ensure full regulatory compliance at all times and for all applicable regulations.	• Comply with all existing regulatory requirements. • Participate continuously in the various industry committees formulating new regulations in conjunction with the FRA. • Maintain constant awareness of the regulatory regime in which we operate the MBTA Service.

Figure 2-1: Objectives for Safety:

Based on our analysis of the current safety condition of the MBTA Service, we are confident that, during the first year of operation, we will achieve noticeable improvement in the safety culture and the safety awareness of the commuter rail workforce, resulting in measurable improvements in safety performance and ensuing benefits to passengers and the communities served by the MBTA's trains.

III. Our Assessment of the Current Situation

Over the past year, we have spent considerable time on the MBTA Service riding the trains, assessing station conditions and participating fully in the Pre-Proposal Property Condition Assessment. We have also carefully reviewed the information provided to us by the MBTA in response to Proposers' questions and data requests, and we have researched, to the extent possible, safety statistics and FRA reportable injury information that relates to the current safety environment on the MBTA Service.

Our research and analyses have revealed many areas in which we believe that we can improve on existing safety practices and results for the MBTA. While the FRA reportable injury ratio has declined on the MBTA Service over the past 10 years, it still only ranks third among the five largest commuter rail systems in the U.S. (in order, best to worst, Metra, Metro North, New Jersey Transit/MBTA (tie), Long Island Rail Road) — one full reportable injury per 200,000 hours worked and a 55% higher injury ratio than Metra's record.

We will do a better job of managing safety and reducing injuries to our employees and to the passengers on the trains. As demonstrated below, the total number of accidents/incidents in the MBTA Service has not seen any significant improvement over the past 10 years, while passenger injuries have significantly increased on an annual basis.

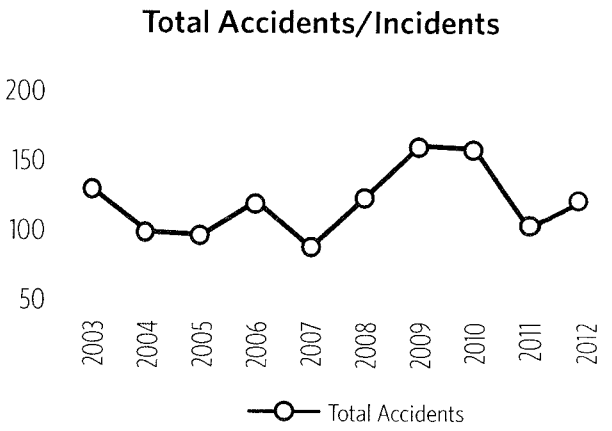


Figure 2-2: Total Accidents / Incidents

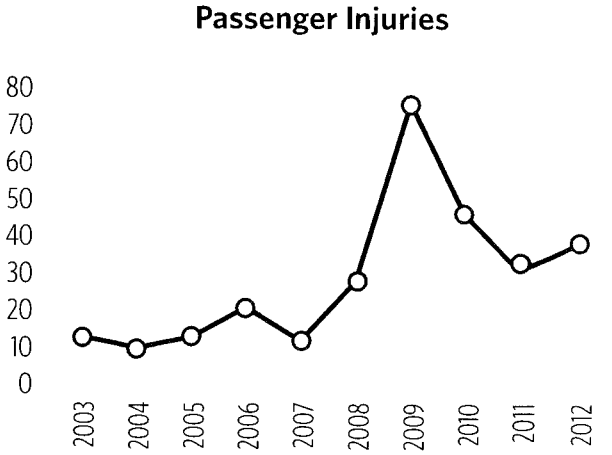


Figure 2-3: Total Passenger Injuries

IV. The Results We Will Deliver

We feel that the most important results coming from the establishment of a true safety culture and the overall OSCP will be reductions in injuries to passengers and to employees, which will have an accompanying reduction in the costs associated with these injuries. The current operator had an FRA reportable injury ratio of 2.8 injuries per 200,000 labor hours in 2012. The best ratio reported by a major commuter rail system in the U.S., Metra, was 1.8 reportable injuries. Three of our key managers, including our General Manager, our Chief Transportation Officer and our Director - Safety and Security, will come to the MBTA Service from Metra,

where they were heavily involved in the safety program that produced this stellar record.

Reducing the reportable injury ratio in the MBTA Service to equal or surpass Metra's 2012 record will result in more than 20 fewer reportable injuries in the first years after we take over the operation and maintenance of the MBTA Service. At an average cost of almost $9,000 per reportable injury over the past few years, this will translate into an annual savings to the MBTA of almost $200,000.

During that same period, passenger injuries have averaged almost 40 a year on the MBTA Service, at an average cost to the MBTA of almost $1,500 per incident. Our increased focus on safety, both for employees and passengers, especially through the personal safety plan program for all of our operating personnel, will begin to show results in the first year and we are aggressively targeting reductions in injuries and accidents/ incidents, as shown below:

Our Objectives	Our Results
Improve overall safety level	28% reduction of total incidents by 2019
Reduce passenger injuries	74% reduction of passengers injuries by 2019
Improve employee safety	35% reduction of the employee reportable injury rate per 200K hours worked by 2019

Figure 2-4: Targeted Reductions in Injuries and Accidents/Incidents

Together, these programs will create a much safer environment and sense of well being for our passengers on board MBTA trains and generate almost $250,000 in annual savings to the MBTA.

Our safety objectives and the accompanying KPIs which we will establish to measure progress toward our objectives and the results which we will deliver are shown below here.

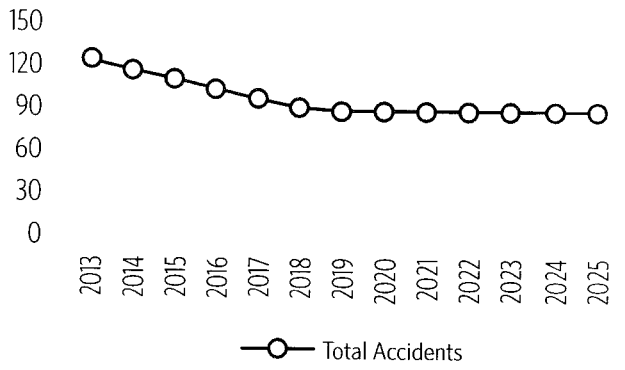


Figure 2-5: Total Accidents/Incidents Forecast

Figure 2-6: Passenger Injuries Forecast

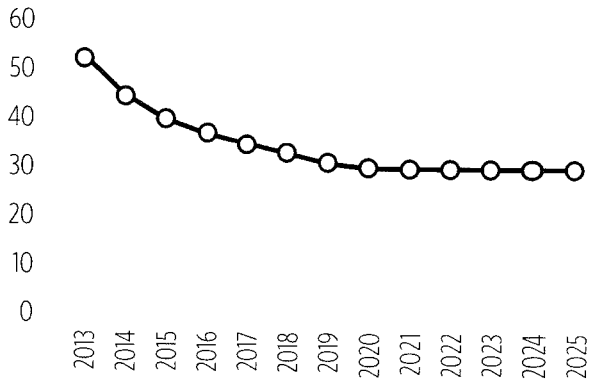


Figure 2-7: Cases of Days Absent from Work Forecast

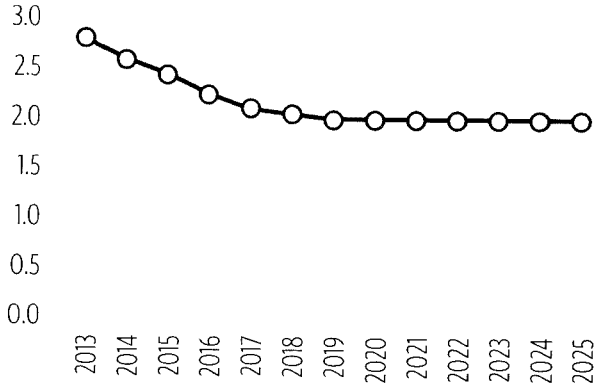


Figure 2-8: Employee On-Duty Injury Rate per 200K Hours Forecast

The complete range of key performance indicators (KPIs) which we will develop and implement for the MBTA Service is described in Section 8 Management Plan.

2.A. SAFETY PLAN

Draft Safety Plan

Overview of Our Commitment to Safety

Our commitment to safety begins with the CEO of our company and extends to every employee and every level of the organization. That fundamental principle, so vital to safe rail operations and the well-being of every passenger and employee, is expressed by Keolis CEO Jean-Pierre Farandou in the following message:

OUR COMMITMENT TO RAILWAY SAFETY

At Keolis and our subsidiaries we are committed to a culture of Total Safety for our customers, our employees, our suppliers and the general public.

Safety is always our first priority and takes precedence over all other considerations.

Our Railway Safety Management Policy incorporates high standards of performance, which must be complied with throughout the Group. This policy has been developed by Group Headquarters, with the complete agreement of our shareholders. It must be cascaded throughout the organization and implemented effectively by Country MDs, Managing Directors, the Directors of subsidiaries and their teams on a day-to-day basis.

Our Safety Policy outlines high-level principles which are to be applied across the group. Each business unit and subsidiary defines the specific responsibilities, standards and procedures to be applied in their particular operating environment. All Keolis employees are expected to fully comply with the local rules and procedures in force wherever they are employed.

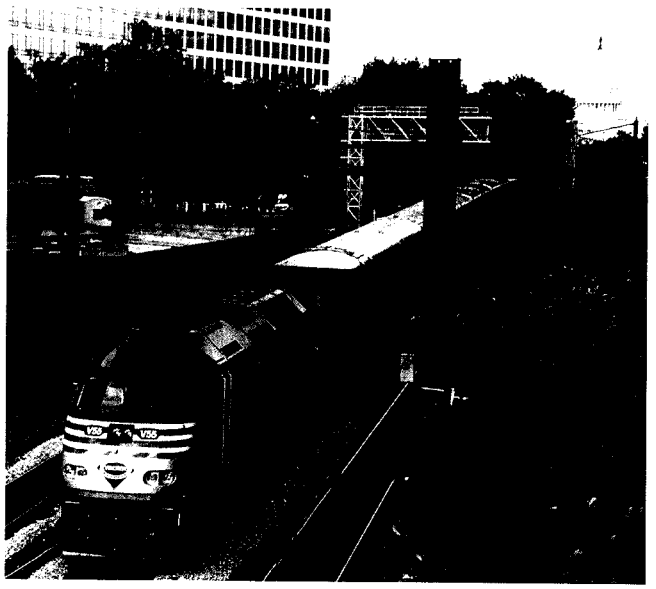
All rail operations are covered by this framework and its specific safety management procedures. Each director of a rail franchise holds accountability for safety and is expected to lead by personal example. This person must ensure distribution, update and compliance with legislation and regulations in this regard and effectively promote a proactive culture of total safety.

To support and in order to reinforce our commitment, Keolis Group have created an Internal Rail Safety Committee, led by the Director of Operations, Projects and Innovation. This committee develops and implements the Safety Management System with the objective of driving continuous improvement, taking advantage of the quality and diversity of experience within the Group. The basis of this approach is sharing best practice, undertaking preventive and corrective actions in order to achieve our safety objectives.

Safety is the responsibility of every employee, irrespective of employer or position. This means that each employee has a duty to take all reasonable care for their own health and safety and that of their colleagues, customers and others. No employee is expected to work in an unsafe manner, and I guarantee my personal support to any employee who refuses to work if it is unsafe to do so. I fully support the free and open exchange of views, and I expect all employees to raise any safety issues or concerns that they have with their managers.

With the integration of this Railway Safety Management Policy, the Keolis Group intends to reinforce a culture of excellence in safety management. I am committed to excellence in safety management and I am counting on every member of the Keolis team to support this.

— Jean-Pierre Farandou



Implementation of Our Commitment to Safety

For all of its passenger rail operations worldwide, Keolis implements a comprehensive system of safety that is rigorously applied in each system/service operated and managed. For our current passenger rail operation in the U.S., the VRE Service, and for the MBTA Service when we are chosen as the operator, the principal tenets and governing principles of our approach to safety are contained in the KCS General Safety Policy (GSP). This policy, developed and implemented by the KCS General Safety Committee, whose activities and jurisdiction are proscribed in the GSP, is founded on three pillars:

- A clearly-structured, documented assignment of accountabilities and responsibilities that are established and monitored to ensure that every employee knows exactly what their duties are and that they have the proper training and resources to perform them in a safe, proficient manner at all times, without exception
- A systematic, risk-based approach to identifying, mitigating or eliminating hazards before accidents or injuries occur in order to achieve the highest levels of operational, employee and passenger safety
- The establishment of peer review committees and regular use of safety reporting channels, safety inspection, monitoring and auditing programs, safety training and awareness sessions

Adherence to each of these safety principles is mandated by Keolis. The KCS General Safety Policy, which will govern our operational and maintenance activities for the MBTA Service, is contained in Appendix 2-1. While this policy can be construed as the equivalent of a System Safety Program Plan, it is much more than that. Rather, it is the governing set of safety policies and procedures that establish and maintain a safety culture within the operation and maintenance of a passenger rail service. It has proven to be effective in this regard in several countries, including the U.S., and it will provide one of the most effective building blocks for our overall OSCP and for our program to attain the aggressive safety goals mentioned above. Our managers will manage pursuant to this policy. Our employees will work safely pursuant to this policy. We will compile — and report to the MBTA — all of our safety statistics and perform all of our safety analyses under the framework provided to us by this policy.

The manner in which Keolis ties all of these policies, programs and procedures together into a cohesive safety plan—and the results of these efforts—are combined into the annual Keolis Group Rail Safety Review, the most recent version of which is attached as Appendix 2-2. This annual report, which provides a case study of how Keolis establishes and maintains a very high level of safety in a passenger rail operation, illustrates the safety culture which we will establish for the MBTA Service. It also illustrates some of the safety metrics and management approaches which will be integral elements of that culture and of the comprehensive safety management system that will govern all of our activities on behalf of the MBTA.

The annual review includes both the overall safety results for 2012 and the comprehensive 2013 safety improvement plan for all Keolis rail properties, including the VRE Service. The annual review provides an excellent example of the caliber and the quality of safety management,

documentation, analysis and reporting which are trademarks of every Keolis passenger rail operation. It also provides a vivid picture of the type of safety documentation and reporting that the MBTA will receive from Keolis in our operation of your service.

Our Approach to Safety and Regulatory Compliance for the MBTA Service

As mentioned earlier, our approach to safety and regulatory compliance for the MBTA Service will begin with the appointment of Justin Vonashek to be the Director in charge of this department. He will be supported in the comprehensive effort to establish a safety culture that will produce the safest, most accident/injury-free commuter rail network in the U.S. by a team of safety professionals organized and tasked to develop programs and initiatives to embed safety in every activity and work effort undertaken by every one of our employees. This safety organization is shown below:

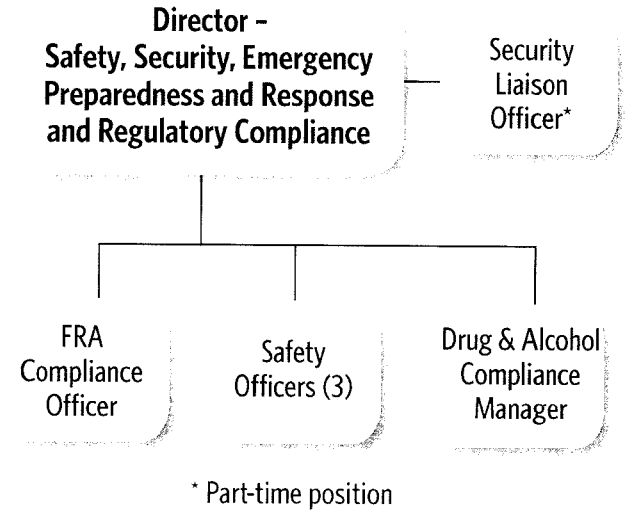

Director – Safety, Security, Emergency Preparedness and Response and Regulatory Compliance
Security Liaison Officer*
FRA Compliance Officer
Safety Officers (3)
Drug & Alcohol Compliance Manager
* Part-time position

Figure 2-9: Safety Organization Chart

We recognize that, at least initially, most of the Safety Department staff will transition to us from the current contractor. To support the work of this staff — and to reinforce our principle of change management and enhance the establishment of a true safety culture — we will deploy a team of safety experts from Arthur D. Little, who will be responsible for a comprehensive program of safety initiatives aimed at creating enhanced safety awareness and a Keolis-style safety culture within the commuter rail workforce. The various elements of this program are described in the following sections. ADL has extensive experience in developing and delivering safety management and leadership programs over the past 25 years in the United Kingdom, across Europe and in North America. For example, they run the Strategic Safety Management Program for the rail industry in Great Britain — having put some 2000 senior managers through the course in the past 18 years. They also recently provided the 300 most senior managers of a major international transport company (with operations in the U.S.) with safety leadership training.

ADL Program

Safety Development Areas

Working with ADL, we will implement a development program in the area of safety management. This program will encompass a range of specific activities designed to truly progress the culture of safety throughout the company, not just go through the motions. The program will be underpinned with strengthened safety leadership. We firmly believe that the key to successful change grows out of first strengthening safety leadership, then setting clear expectations of safety across all managers and staff, developing and administering training plans focused on safety goals and objectives and, ultimately, measuring and reviewing performance against the desired goals.

Safety Leadership

The most important single element in securing safety improvement is effective leadership from the most senior levels of the organization. Of course, strong commitment from the very top is a given in Keolis — but the purpose of further developing safety leadership for the MBTA Service is to:

- Strengthen the message of the importance of safety across all key managers

- Secure a common understanding of safety objectives, targets and goals across the company
- Communicate the safety strategy and policy to managers in a way that is far more effective than simply in a written form
- Share best practices in leadership behavior that creates and sustains a strong safety culture

ADL will first develop a safety leadership event that will be delivered across all levels of management in the company, initially in our first year of operation and then at follow-up intervals to be determined.

The agenda for this course will include:

- **Why manage safety.** Balancing the health, economic and legal requirements; demonstrating the business costs of safety losses
- **Safety strategy.** Setting the direction for safety to meet stakeholder needs
- **Hazard management.** Identifying hazards and putting in place appropriate controls to eliminate them
- **Safety leadership.** Balancing control and care as a leader; discussion of the top 10 attributes of effective leadership (create shared values, lead by example, create personal ownership of safety, develop open reporting culture, optimize bureaucracy and balance empowerment, etc.)

Of critical importance is the engagement of those taking part in the event — active participation in carefully designed case studies is extremely important for allowing participants to get the most value from the time invested.

Standards

While the rail industry is heavily regulated, to further develop the processes for safety management, standards will be prepared for specific areas. These will focus on those areas that are deemed to be less well developed by the incumbent and where there is greatest potential for improvement. Examples include:

- **Effective hazard management.** This will set the expectation that every employee must have a role in the effective management of hazards, including identifying hazards in the workplace and in operations, methods for hazard assessment, taking actions to eliminate hazards and providing consistent means of ranking hazards for prioritizing action. We will reinforce and emphasize already-established methodologies for ranking hazards and maintaining a companywide hazard management system whereby the controls for hazards can be systematically reviewed and monitored to support on-going safety improvement.

  Due to the unique operational and safety characteristics of the MBTA Service, we envision that this program, at least initially, will focus on locomotive engineer performance and proficiency, improved/enhanced grade crossing safety and passenger safety, especially in regard to keeping manual coach doors closed whenever trains are in operation.
- **Accident and incident investigation.** The principle is to establish facts and to prevent reoccurrence using latest best-practice methods that have been applied by transport operators internationally. Different levels of investigation are defined for accidents with varying degrees of potential severity (so accidents with potential for greater severity will merit more detailed investigation).
- **Incident reporting and analysis.** The principle is to get maximum value from collection of safety-related data based on the idea that DATA -> INFORMATION -> ACTION. The standard will mandate the data fields that are required to be completed for each incident and accident, such that trending and investigation can reveal information that would be otherwise unavailable.

Establishing Key Safety Performance Indicators (KPIs)

For any safety development program, the goals of the program must be aligned with carefully designed key safety performance indicators. Simply, setting clear targets and measuring specific aspects of performance against these targets will be required not only to track progress

towards improved safety, but also to incentivize individuals, to achieve these targets. Examples of the KPIs we will implement appear earlier in this Section and in Section 8 Management Plan.

Skills Development Program

As well as the development of safety leadership competence discussed above, the safety competence of managers will also be developed through dedicated training courses. These will cover topics such as:

- **Hazard awareness and effective management.** How do I identify hazards? How do I know that hazards in my part of the business are effectively controlled? How do I know if I should do more to reduce or eliminate hazards?
- **Accident and incident investigation.** Principles for best-practice investigation; establishing the facts, interviewing, evidence, developing conclusions and recommendations; writing an effective investigation report.
- **Safety inspections and audit.** Planned general inspections; correcting unsafe acts or conditions; internal audits; external audits.

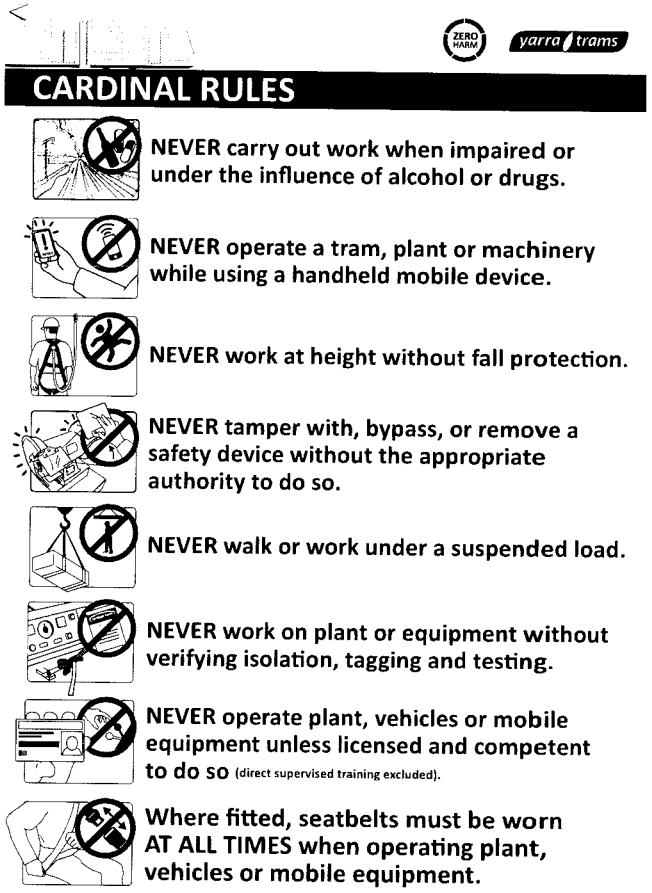
All courses will be developed to include practical case study sessions whereby participants get to practice and develop skills, and will conclude with a written test to form part of the competency development of all managers.

Communications

To provide overarching support for the other safety critical functions and to help strengthen the on-going development of safety as a core value, we will develop and launch a safety communications campaign. There are a number of elements that the campaign will include, for example:

- A brand for the safety development program, used for all safety-related communications
- Pocket cards, which carry four or five KCS/ MBTA "golden rules" that relate to the core safety requirements of employees. Examples include "I will always arrive for work fit and well rested," "I will always report unsafe conditions or acts," etc.
- Briefing of the "golden rules" to all staff
- Booklet issued to all staff from the General Manager to launch the safety development program, and to outline expectations off all managers and staff throughout the company

An example of a Golden, or, in this case, a Cardinal Rules program, already in effect in Melbourne, Australia in our light rail operation, appears below:


ZERO HARM
yarra trams
CARDINAL RULES
NEVER carry out work when impaired or under the influence of alcohol or drugs.
NEVER operate a tram, plant or machinery while using a handheld mobile device.
NEVER work at height without fall protection.
NEVER tamper with, bypass, or remove a safety device without the appropriate authority to do so.
NEVER walk or work under a suspended load.
NEVER work on plant or equipment without verifying isolation, tagging and testing.
NEVER operate plant, vehicles or mobile equipment unless licensed and competent to do so (direct supervised training excluded).
Where fitted, seatbelts must be worn AT ALL TIMES when operating plant, vehicles or mobile equipment.

Other specific communications will be developed, as required, to support more local initiatives.

Our timetable for implementing these safety initiatives is shown below.

Task	jan-14	feb-14	mar-14	apr-14	may-14	jun-14	jul-14	aug-14	sept-14	oct-14	nov-14	dec-14
Safety Development Areas			x	x	x	x	x	x	x			
Safety Leadership			x	x	x	x	x	x	x			
Standards					x	x	x	x	x			
Establishing Key Safety Performance Indicators					x	x	x	x	x			
Skills Development Program					x	x	x	x	x			
Communications					x	x	x	x				

Figure 2-10: Task Schedule

Application of the Operator Safety Compliance Plan and Regulatory Compliance Program

Arthur D. Little's expertise will supplement and expand our approach to rail safety described above in managing and operating passenger rail operations. As we have done as the operator for the VRE Service, moreover, we will adapt our existing safety programs to the specific safety needs and safety circumstances of the MBTA Service. This will be done by studying the existing MBTA SSPP to ensure complete integration, coordination and interface with our OSCP and by incorporating the latest updates and regulatory initiatives from the FRA and the APTA in the area of rail safety. We have used this same approach in the VRE Service, where the Keolis SSPP has been fully coordinated with the VRE SSPP, and together these documents provide governance for all safety activities in that service.

Another key element of our overall approach to safety for the MBTA Service will be the diligence with which we approach regulatory compliance. As demonstrated by our experience in the operation of the VRE Service, we will immediately establish a close working relationship with the FRA representatives charged with overseeing the MBTA Service, many of whom are the same individuals we work with on a frequent basis for the VRE Service. Our existing FRA-required plans and programs for the VRE Service will be tailored to the MBTA Service during Mobilization and either submitted to or made ready for inspection/review by the FRA, depending on the specific requirements of each plan/program.

Furthermore, our representatives and our proposed Director - Safety and Security, Justin Vonashek, recently attended the annual FRA update on ongoing and pending regulatory initiatives, held in Washington, DC on June 14, 2013. This update was presented as part of the 48th meeting of the Railroad Safety Advisory Committee, whose members are drawn from all corners of the railroad industry and who work closely with the FRA in the development and implementation of new safety regulations for the industry. Keolis has participated in these types of events for several years. This means that we are not only able to promise — and deliver — to the MBTA full regulatory compliance at all times in the operation of the MBTA Service, but we can also anticipate and plan well in advance for the implementation of new regulations as part of our everyday safety program. As examples, new regulations which the FRA intends to promulgate before the July 1, 2014 date for the new contract/contract operator include:

- Passenger Train Emergency Preparedness Program (PTEPP), featuring increased training requirements for Operations Control Center (train dispatchers) personnel
- The new System Safety Plan regulation, 49 CFR Part 270, which the FRA intends to promulgate soon and which will lead to a new emphasis on hazard identification and resolution for passenger rail services and systems
- New, enhanced training standards for railroad employees, to assure that training is effective and results are measurable/documented

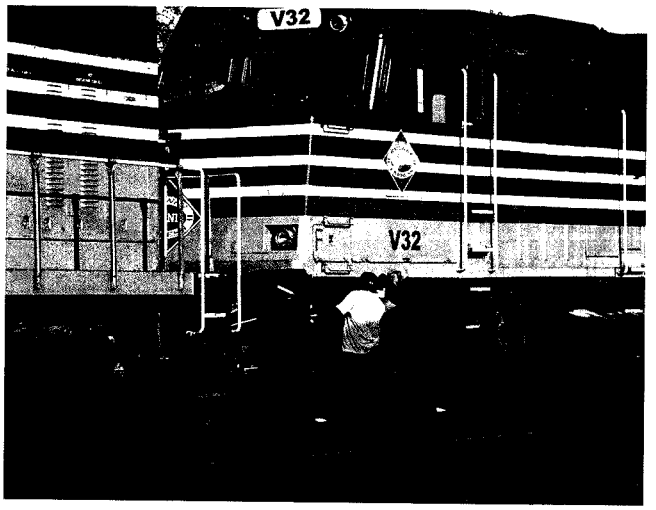
We will be ready for these new regulations and prepared to put them into effect when we assume operational control of the MBTA Service.

In addition to the general aspects of our approach to total safety in rail operations described above, our experience at VRE has taught us two important lessons that we will bring to the MBTA Service:

- It's easy to say that safety begins with everyone, but to truly put that principle into practice, there needs to be a specific program to demonstrate commitment to the principle every day. In the VRE Service, we require every employee to develop his/her individual safety and security program for working safely and injury-free. This includes assuring the safety of passengers on their trains, being aware of/recognizing hazards on and around the railroad and knowing the proper response in each case. Each one of our employees at VRE has submitted his/her plan to the Manager of Safety and Training, has discussed this plan with that manager and is now living his/her own safety plan in their work activities.

  Consequently, we can state with complete assurance that safety and security in the VRE Service is everyone's responsibility.
- Transitioning into a new service or operation requires a great deal of preparation and a number of audits and inspections of the operation and the assets involved. We found at VRE that, in addition to preparing all the required FRA programs, it was important to conduct a baseline safety audit of the way in which we had set up our management team, the way in which we were managing the VRE Service and our efforts to achieve total contractual and regulatory compliance. This audit, conducted approximately three months after we took over the VRE Service, proved to be very helpful in getting us started in the right way in the most important element of this new operation.

We will utilize this same methodology for the MBTA Service.



Specific Elements of Our OSCP (as required by the RFP, ITP, Appendix B, Section B3.2)

As required by the RFP, following is a detailed description of several of the specific elements of our OSCP:

Performance of Regular Safety Inspections

The purpose of conducting regular safety inspections is to identify and minimize hazards, risks and unsafe work practices. It is the first and most fundamental step in the hazard identification and correction process. If done consistently, conscientiously and according to established standards and protocols, it can prevent the occurrence of accidents and incidents. We will establish and follow all legislated, contractual and company railroad operations and maintenance/inspection standards and safety guidelines. We will continually work to analyze identified workplace hazards for their potential impact on train operations and public and employee safety.

The following key activities will be used to identify and resolve system hazards:

- Establishment of a clear and unambiguous chain of accountability of safety responsibilities, extending to each and every person involved in the MBTA Service
- Establishment of standard operating procedures and activities
- Regularly scheduled inspection and maintenance programs

- Frequently reviewed safety and operating procedures
- Establishment of a multi-level series of Joint Labor/Management Safety Committees
- Consistent and timely accident and injury reporting and cause analysis and correction

Regular safety inspections will encompass the entire system and environment in which the rail service operates: facilities, equipment, employees, stations and procedures. Safety inspections will include:

- **Preventive inspections.** Conducted at routine or periodic intervals, as specified by regulatory or company requirements
- **Post-incident inspections.** To determine incident cause, identify solutions to prevent recurrence (including the documentation of any deficiencies found during the inspection) and identify the action(s) needed to be taken to correct any deficiencies
- **Follow-up inspections.** To ascertain that corrective actions have been properly applied and implemented and to verify that the corrective actions have had the desired effect

Safety inspections and maintenance procedures will be performed according to legal and contractual requirements and standards. Examples include:

- Equipment inspections:
  - Daily and weekly inspection
  - Forty-five day inspections and preventive maintenance
  - Three-month inspections and preventive maintenance
  - Annual preventive maintenance
  - Biennial preventive maintenance
- Facility inspections (OSHA, EPA compliance)
- Periodic employee training, certification, retraining and recertification
- Train and engine crew operational tests and inspections
- Employee performance reviews for operating crews
- Contractor work site audits and inspections
- Hazardous waste management
- Security audits of facilities, stations and equipment
- Blue Flag compliance inspections
- Housekeeping inspections and personal protective equipment

The Director - Safety and Security will oversee the conduct of regular safety meetings for the purpose of sharing safety concerns and identifying and implementing solutions for sharing with the rest of our workforce.

Correction of Safety Problems that Have Been Identified

Identified hazards will be resolved/corrected on a prioritized basis, and the corrective actions will be documented, tracked and evaluated for their effectiveness in solving the problems to which they were applied. We will utilize a risk assessment system of risk ranking and prioritization based upon Element 18 of the Keolis SSPP, which has been adapted for the VRE Service and which is contained in Appendix 2-3.

Once a hazard is identified, appropriately trained and qualified subject-matter experts (including employees, managers and contracted safety experts) will take steps to assess the frequency and severity of the hazard and its likelihood of becoming a mishap risk. Using the risk assessment matrix in Element 18, they will determine the potential negative impact of the hazard on personnel, facilities, equipment, operations, the public and the environment, as well as on the system itself. Following the ranking process, potential risk mitigation/elimination alternatives and the expected effectiveness of each alternative or method can be identified. The risk mitigation process concludes when the residual risk has been reduced to an acceptable level. The system safety design order of precedence for mitigating identified hazards is as follows:

- **Eliminate hazards through design selection.** If unable to eliminate an identified hazard, reduce the associated mishap risk to an acceptable level through design selection.

- **Incorporate safety devices.** If unable to eliminate the hazard through design selection, reduce the mishap risk to an acceptable level using protective safety features or devices.
- **Provide warning devices.** If safety devices do not adequately lower the mishap risk of the hazard, include a detection and warning system to alert personnel to the particular hazard.
- **Develop procedures and training.** Whenever it is impractical to eliminate hazards through design selection or to reduce the associated risk to an acceptable level with safety and warning devices, incorporate special procedures and training. Procedures may include the use of personal protective equipment. For hazards assigned Catastrophic or Critical Severity categories, avoid using warning, caution or other written advisory as the only risk reduction method.

Documentation of the entire process is essential to a complete risk mitigation/elimination process. Meaningful and accurate documentation enables system users to prioritize, track and analyze improvement plans developed and their implementation. Our documentation features will include:

- Initial hazard identification
- Hazard/mishap/risk assessment ranking
- Risk mitigation/elimination measures developed
- Corrective action assignment and tracking
- Reporting and analysis of outcomes

The final and most important step in the corrective action process is verification of mishap risk reduction. We will accomplish this through analysis, testing or inspection of the corrective measures applied. Through the follow-up inspection process, we will be able to identify any residual risk. We will report any and all new hazards identified during the verification process to the appropriate manager, and the assessment cycle will be reinitiated until the risk is eliminated or reduced to an acceptable level.

Preparation of an Annual Safety Review Report and Compliance with FRA Reporting Requirements

As part of the Keolis-mandated annual safety report - safety forecast mentioned earlier, we will annually review portions of our OSCP on a prioritized basis to maximize the safety of our operations. This review will include routine and incident-driven reviews, investigations and audits of the safety plan, regulatory compliance status, and knowledge and compliance with industry-effective practices. The elements of the review will include, but not be limited to, accident/incident investigations, the hazard identification process, regulatory inspection reports, safety committee reports and recommendations, industry standards and best practices or in-house inspections and trend analysis. Subsequent to the review and as necessary, we will revise our Standard Operating Procedures, Emergency Preparedness and Response Plans, training techniques and reporting practices if such revisions will enhance safety by preventing/reducing injury or loss of life to our employees, MBTA passengers, MBTA staff or the communities within MBTA's Service territory.

Safety Management Assessment

We will conduct an internal audit of a significant portion of the OSCP annually and invite the MBTA to participate. Highly safety-sensitive elements of the OSCP will be selected for audit more frequently than elements relating to standard business operations with lower risk levels. In addition, we will conduct at least two audits per year of OSCP and FRA compliance in several safety-critical areas, including:

- 49 CFR Part 240 - Locomotive Engineer Certification records
- 49 CFR Part 242 - Conductor Certification Records
- 49 CFR Part 217 - Program of Operational Tests and Inspections
- 49 CFR Part 219 - Program of Drug and Alcohol Control and Testing

- 49 CFR Part 228 - Hours of Service Compliance and Recordkeeping
- 49 CFR Part 239 - Emergency Preparedness critique and debriefing records and After Action reports

Safety Training

Employee Safety Training

We will conduct a safety orientation program to introduce new employees to our mandate to provide superior service. As part of that program, employees will be given a new employee orientation procedure for each job area, which is a checklist of safety hazards required for each job type. All employees will be required to accept personal responsibility for their actions and will be informed of their duty to take all reasonable care for their own health and safety and that of their colleagues, customers and others.

Training is based upon job classification and will include a combination of classroom and on-the-job training. Both types of training will be standardized, documented and tracked for initial and refresher/periodic training intervals. Elements of training may include the following basic safety principles, including hazard identification and accident prevention:

- Blue Flag
- Roadway worker protection
- FRA regulations pertinent to specific job types
- First aid and CPR
- Hazardous material awareness
- Monthly safety training topics
- Forklift
- Lockout/tagout
- Hazard communication (MSDS sheets)
- Basic fire prevention
- Personal protective equipment
- Workplace violence and sexual harassment
- Drugs and alcohol
- Housekeeping
- Safety and operating rules training
- Customer service training
- Emergency preparedness training

Our employees and subcontractors engaged in the MBTA Service will receive safety training, including the governing principles of the National Incident Management Systems (NIMS) and ICS at the level to which it applies to their duties. A detailed description of the security training which our employees will receive is contained in Section 3 Security, Emergency Preparedness and Emergency Response Plan.

Identification of Key Safety Personnel

Safety-Sensitive Positions

Pursuant to 49 CFR Part 209.303, safety-sensitive positions are considered to include the following at a minimum:

- Railroad employees who are assigned to perform service subject to the Hours of Service Act (45 USC 61-64b) during a duty tour
- Railroad employees or agents who:
  - Inspect, install, repair or maintain track and roadbed
  - Inspect, repair or maintain, locomotives, passenger cars and freight cars
  - Conduct training and testing of employees when the training or testing is required by the FRA's safety regulations
- Railroad managers, supervisors, or agents who:
  - Perform any safety-sensitive functions

- Supervise and otherwise direct the performance of any safety-sensitive functions
- Are in a position to direct the commission of violations of any of the requirements of the work covered by the FRA regulations contained in 49 CFR Parts 213 through 236.

For the MBTA Service, safety-sensitive management positions will include our General Manager and all key managers, as well as all Safety, Transportation, Maintenance of Equipment and Engineering managers. Additional members of the management team may be designated as safety-sensitive during the course of the Mobilization.

Establishment of Joint Labor / Management Safety Committees

We firmly believe that every employee is an equal partner in the safety process and that safety must be a non-negotiable part of work. To place a strong emphasis on establishing a trusting relationship between management and employees, we will establish Joint Labor/ Management Safety Committees. By using the joint safety committee approach, we will replace the punitive aspects of safety compliance with a positive, lessons-learned approach. We will ensure that meetings are held with appropriate frequency, minutes are taken as appropriate and action items are followed to resolution. The committees will include:

Local Safety Committees

Each maintenance facility or crew location will have its own local committee, where employees can be given up to one hour per week to meet and discuss accidents/injuries, safety initiatives and general safety conditions in the facility and the surrounding area, as well as compliance with employee's individual safety plans.

1) Terminal Area Safety Committees, i.e., North Station, South Station

Each terminal area will have a safety committee headed by the manager responsible for the area, which will meet monthly to review local safety committee action plans and results and to resolve local safety issues.

2) Departmental Safety Committees

Departmental safety committees will meet weekly to review all of the previous week's accident/injury reports and develop action plans to identify, resolve, remove and eliminate any identified/known causes of accidents or injuries.

3) Senior Safety Committee

The Senior Safety Committee will include the General Manager, the Director - Safety and Security, all other line department heads and a senior union official, usually a General Chairman, elected by the unions.

The first goal of the safety committees is to clearly communicate, to the entire company, the mission, goals and objectives, and most importantly follow-through of the committee when it comes to addressing workplace safety.

The primary objective of the safety committees is to provide support to enhance the OSCP. In addition to this primary mission, the Joint Safety Committees encourage employees to participate in the safety process for the betterment of all concerned. Each employee has unique skills to bring to a Safety Committee's mutually shared goal of working in a safe manner.

The personal safety and health of each of our employees is of primary importance to us. The Joint Safety Committees will give employees a voice in the safety management process to ensure all mechanical and physical facilities required for personal safety and health are controlled and maintained in keeping with regulatory, company and industry standards.

In carrying out their mission, the Committees will follow four basic objectives:

The Joint Labor/Management Safety Committees will:

- Help to formulate and disseminate policies, practices and procedures that promote health and safety
- Assist management in the planning of occupational health and safety, including helping to set priorities to control hazards

- Act as problem-solving groups to help with the identification and control of hazards through the conduct of routine and responsive safety inspections
- Help to resolve health and safety issues through the analysis of inspection reports and determine:
  - Priorities for corrective action
  - Need for improving safe work practices
  - Insight about why accidents are occurring in particular areas
  - Need for training in certain areas
  - Areas and equipment that require more in-depth hazard analysis

Safety Committees will review the progress of the recommendations, especially when they pertain to the education and training of employees. It will also Safety Committees' responsibility to study the information from regular inspections. This will help in identifying trends for the maintenance of an effective safety program.

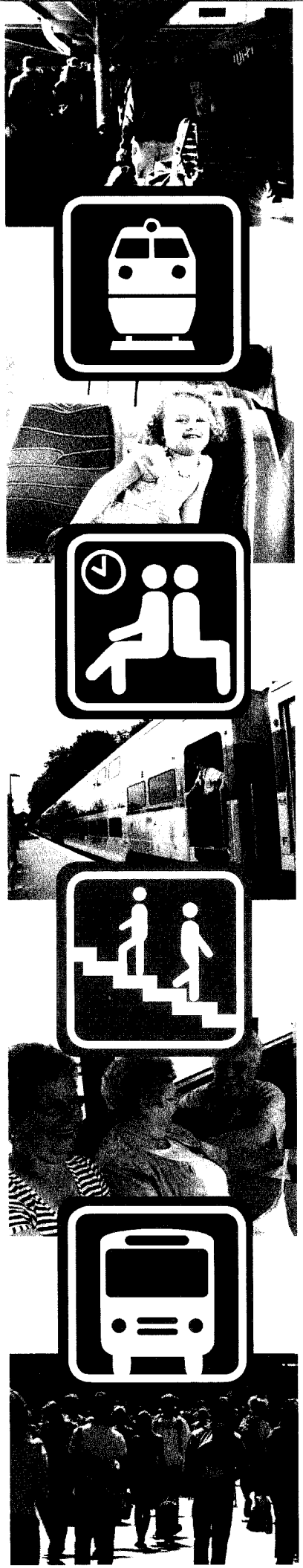
We will utilize the employee suggestion and safety committee approach to continually fine-tune the OSCP.

2.B. BEST PRACTICES SUPPORT

The Operator Safety Compliance Plan is, pursuant to the MBTA's ranking, the most important of the Plans that comprise our Proposal. Accordingly, we have placed significant emphasis on the development of this plan and pledge to the MBTA the following innovations, initiatives and Best Practices for improving the overall safety of the MBTA Service which are summarized in the figure below:

Area	Initiative	Innovative	Best Practice	Beneficial to MBTA Customers	Cost Efficient	Support
Management and Workforce Involvement	Director – Safety, Security has been recognized as one of the "20 Rising Stars Under the Age of 40 in U.S. Railroading"		✓	✓	✓	I.
	Train crew personnel will develop and adhere to implement and adhere to individual safety plan	✓	✓	✓	✓	I.
Governance and Objectives	In addition to the Operator Compliance Safety Plan, all activities in the MBTA Service will be governed by the Keolis General Safety Policy	✓	✓	✓	✓	2.A. and App. 2-1
	Overall safety culture will produce a 74% reduction in passenger injuries and a 35% reduction in reportable employee injuries by 2019	✓	✓	✓	✓	III. and App. 2-2
	Safety programs, plans and policies will be fully compliant with FRA regulations and the MBTA's System Safety Plan KPI's related to safety will be established and utilized	✓	✓	✓	✓	2.A.
External Expertise	Arthur D. Little will implement a safety management, training and leadership program	✓	✓	✓	✓	I. and 2.A.
Training	Extensive safety training program for all employees	✓	✓	✓		2.A.

Figure 2-11: Safety Best Practices



SECTION 3

Security, Emergency Preparedness and Emergency Response Evaluation Factor Information

SECTION 3 — SECURITY, EMERGENCY PREPAREDNESS AND EMERGENCY RESPONSE EVALUATION FACTOR INFORMATION

Contents

3. INTRODUCTION 2
- I. Executive Summary 2
- II. Our Understanding of the MBTA's Objectives for the Security, Emergency Preparedness and Emergency Response Plan 3
- III. Our Assessment of the Current Situation 3
- IV. The Results We Will Deliver 4

3.A. DRAFT OPERATOR SYSTEM SECURITY COMPLIANCE PLAN (OSSCP) 4
- 3.A.1. MBTA Security Policies, Goals and Objectives 5
- 3.A.2. Managing Threats and Vulnerabilities 5
- 3.A.3. Security of Customers and Operating Personnel 6
- 3.A.4. and 3.A.5. Internal Security and OSSCP Review and Approval 6

3.B. DRAFT EMERGENCY PREPAREDNESS PLAN (EPP) 9

3.C. DRAFT EMERGENCY RESPONSE PLAN (ERP) 14

3.D. BEST PRACTICES SUPPORT 18

APPENDICES ..... Binder 2
- 3-1 Master Agreement with the French National Police
- 3-2 Keolis System Security Plan

3. INTRODUCTION

I. Executive Summary

We are well aware of the increasing importance of a robust, comprehensive security and emergency response program that encompasses all MBTA services and that fully coordinates all of the employees and all of the resources committed to those services, both for the provision of day-to-day system security and for the assurance of an efficient, effective response whenever and wherever there is an emergency. We are equally well aware that the MBTA Police Department is the one agency entrusted with bringing all of the elements of system security and emergency preparedness and response together into a coordinated, thorough response for any security incident affecting the MBTA's services.

As the operator of the MBTA Service, we will at all times cooperate and coordinate with the MBTA Police in implementing security programs and ensuring the safety of KCS and MBTA personnel, of our passengers and of the surrounding communities. We will provide support to the MBTA Police's security programs and initiatives in whatever way possible, and we will fully support their leadership in emergency response situations. We will also maintain this close working relationship with the MBTA Police for emergency preparedness and, during Mobilization, will tailor our 49 CFR Part 239 Passenger Train Emergency Preparedness Program, which we are required to submit to and have approved by the FRA, to be fully inclusive of their leading role and our support activities in the event of a commuter train emergency.

To ensure that we are fully prepared to provide this level of coordination and support, we have already taken several key steps, including the following:

- As described later in this Plan, our Operator System Security Compliance Plan (OSSCP), which we have begun developing, will be consistent with and compliant with the MBTA Police Department's System Security & Emergency Preparedness Plan (SSEPP).
- Our Director-Safety, Security, Emergency Preparedness and Response and Regulatory Compliance (Director Safety and Security), whose qualifications are described in more detail in Section 2 Safety Plan and who was recently named as one of the "20 Rising Stars Under The Age of 40 in U.S. Railroading" by Progressive Railroading, will be in overall charge of our security and emergency preparedness programs.
- We have obtained the services of Tom McCarthy, a former MBTA Deputy Chief of Police and head of rail security for the Transportation Security Administration for New England. Mr. McCarthy will be responsible for developing our OSSCP and for providing liaison to the MBTA Police. His familiarity with MBTA Police security operations, combined with his deep experience with Federal implementation of security programs at the regional level, make Mr. McCarthy uniquely qualified to lead our joint security programs with the MBTA Police.
- With the assistance of the MBTA Police, and through the efforts of Deputy Chief McCarthy, every employee will be familiarized with and trained in the principles of the "See Something, Say Something" campaign and all other MBTA security programs and initiatives applying to the commuter rail system.
- Deputy Chief McCarthy's role will be an ongoing one, assuring that our management

understands the security/emergency preparedness training needs of our employees and that all of our personnel understand what the MBTA Police are trying to achieve and how we can participate and assist.

- We believe that the theme of **Moving Further Together** will be very visible in every aspect of the close coordination of the MBTA Police and KCS in the areas of system security and emergency preparedness/response, beginning with the preparation of our OSSCP.

II. Our Understanding of the MBTA's Objectives for the Security, Emergency Preparedness and Emergency Response Plan

Our security and emergency preparedness/response plans and programs will be integrated with our approach to safety planning/programming and the introduction of a safety culture which we will bring to the MBTA Service. Specifically, our security program will respond fully to the MBTA's objectives, as follows:

MBTA Objectives	Our Approach
To ensure that Proposers have clearly defined roles for security and emergency preparedness and emergency response and have plans demonstrating accountability for the security of the system	**We will:** • Employ the services of former MBTA Deputy Chief of Police and former head of Rail Security for the Transportation Security Administration for New England, Tom McCarthy, as our Security Liaison to the MBTA Police to assure the ultimate in coordination, cooperation and integration of the security efforts and awareness of our workforce committed to the commuter rail service. • Work closely and diligently with the MBTA Police to ensure the fulfillment of our roles and responsibilities in support of all MBTA security, emergency preparedness and response and initiatives
To ensure that Proposers have a plan and processes designed to ensure full compliance with all applicable laws, rules and regulations throughout their performance	**We will:** • Develop and implement an Operator System Security Compliance Plan in accordance with the MBTA's System Security and Emergency Preparedness Plan and Sensitive Security Information guidelines and procedures • Develop and implement a comprehensive 49 CFR Part 239 Passenger Train Emergency Preparedness Plan fully integrated with equivalent MBTA plans and programs

Figure 3-1: Our Response to MBTA Objectives

III. Our Assessment of the Current Situation

In 1987, the MBTA Police took over responsibility for the preponderance of the policing/security/enforcement duties in the commuter rail service area from the former railroad police departments. Today, the MBTA Police Department is recognized as the primary security and emergency response agency for the commuter rail service, and it takes the lead in both making the service more secure and in responding promptly and effectively whenever and wherever circumstances require. This effort, of course, also entails the development and maintenance of close working relationships with the many local police and emergency response forces throughout the commuter rail system, who have always been there as the first responders in the event of a problem on a train, a grade crossing accident or some other event where security/emergency response efforts are required.

The MBTA Police have established the MBTA's System Security and Emergency Preparedness Plan (SSEPP) and, in 2012, the Homeland Security and Emergency Preparedness Division. These Plans meet the criteria and are in compliance with all federal and state rules and regulations. These plans are examined and reviewed by FRA, the Transportation Security Administration (TSA) and the Federal Transit Administration

(FTA). TSA has twice conducted a "Base Analysis and Security Evaluation" of the System Security and Emergency Preparedness Plan in the past eight years. TSA ranks the MBTA in the highest category for security and emergency preparedness.

The MBTA SSEPP, which is the governing Plan that our OSSCP will comply with, is based on the following goals:

- To manage security and preparedness activities by using an all-hazards approach, requiring collaboration, documentation and cooperation among all involved parties
- To establish the specific security and preparedness roles for all involved entities and personnel
- To emphasize the importance of every employee in the overall safety and security of the system. In this regard, our employees will be assigned the same roles and responsibilities as MBTA employees
- To provide an overview of system threat and vulnerability identification, assessment and resolution techniques. We will look to the MBTA Police to play an important role in helping us prepare our employees properly for this responsibility
- Setting security and preparedness goals and objectives

The goals and objectives of the MBTA's SSEPP will serve as the guidance for the development of our security and emergency preparedness/response-related goals as we develop the final versions of our counterpart documentation. We will also work closely with the MBTA Police in developing a series of KPIs to measure the effectiveness of our security efforts.

IV. The Results We Will Deliver

The role of the operator for the MBTA Service is to assure complete familiarity with the activities and programs of the MBTA Police, to function as an extra resource assisting the MBTA Police in whatever way may be requested to keep the commuter system as safe and secure as possible, and to assure that all operator personnel receive the training and have the requisite familiarity with MBTA Police programs and initiatives to be able to assist if called upon to do so. As described in the following sections, our security programs and plans will be designed specifically to ensure that our personnel are fully trained, capable of fulfilling all these roles and accountable for their involvement in security issues whenever called upon.

Our first and most important goal is to play a key role in the provision of a safe and secure environment for our employees and passengers, and we will establish procedures to ensure that the information contained in the above-cited MBTA Plans is familiar to all of our employees and is treated as Sensitive Security Information (SSI). Our approach to compliance with these plans will focus on the familiarization of personnel with Plan details.

The results of our efforts in the areas of security and emergency preparedness/response, all developed under the direction of Deputy Chief McCarthy, will be a closer coordination with the MBTA Police and an enhanced ability on the part of our management team and workforce to assist, to implement and to enhance the programs and initiatives developed by the MBTA Police to make the MBTA Service area safer and more secure.

We will assure that each of our employees knows their role in security and emergency response and is prepared to fulfill that role if called upon to do so.

These results will be delivered through the development and implementation of our Operator System Security Compliance Plan.

3.A. DRAFT OPERATOR SYSTEM SECURITY COMPLIANCE PLAN (OSSCP)

The implementation of our OSSCP, programs and initiatives will be directed by Tom McCarthy, whose resume appears in Section 8 Management Plan. In his position as Security Liaison to the MBTA Police Department, Deputy Chief McCarthy will ensure that all our personnel are, at all times, fully cognizant of all security initiatives, directives and programs put into effect by the MBTA Police Department, who are in charge of security everywhere within the MBTA Service. He will also be responsible for working with the MBTA Police Department on any revisions, amendments and/or enhancements to the MBTA System Security and Emergency Preparedness Plan (SSEPP), provided to us by the MBTA as part of data request fulfillment, as well as assuring our adherence to the MBTA General Manager's policies, goals and objectives.

Our approach here will be very similar to the approach used in France, where Keolis has recently concluded a Master Agreement to work in full harmony and cooperation with the French National Police. A copy of this agreement is included as Appendix 3-1 and, if the MBTA Police would like to consider concluding a similar pact with us for the MBTA Service, we would be happy to enter into discussions immediately upon Notice to Proceed (NTP).

We will participate closely with the MBTA Police and, through Deputy Chief McCarthy and our Director of Safety and Security and staff, assure that we collaborate and cooperate fully with the MBTA in the fulfillment of each aspect of the SSEPP's purpose, as well as the attainment of the stated objectives from Page 7 of the MBTA's SSEPP, which are:

- Ensuring that all appropriate personnel are trained in National Incident Management System (NIMS) and the Incident Command System (ICS)
- Developing and managing a system-wide all-hazards Emergency Management Plan
- Developing and implementing training drills and exercises

Importantly, for our compliance efforts and activities, we will take our lead from the MBTA Police during Mobilization as we develop the final OSSCP in accordance with the MBTA's SSEPP and Sensitive Security Information guidelines and procedures. We will create a plan that is highly complementary to the MBTA's SSEPP. Our initial draft, describing several of the components of our plan, is shown below:

3.A.1. MBTA SECURITY POLICIES, GOALS AND OBJECTIVES

Immediately upon NTP, we will request a meeting with the MBTA Police to plan a training session during Mobilization for our General Manager, Director-Safety and Security, our Security Liaison and other key senior staff members to learn the details of the policies, goals and objectives set for the MBTA's security program by the MBTA General Manager. At this meeting, and through the work of our Security Liaison, we will, as the MBTA Police desire, either schedule training sessions for all personnel, both during Mobilization, to the extent possible, and during operations, or employ the train-the-trainer approach and, again under the direction of our Security Liaison, conduct our own training sessions for our entire workforce, so everyone working in the MBTA Service understands the security program, the security initiatives and the security objectives that the MBTA has set for itself in all its services, especially for commuter rail.

3.A.2. MANAGING THREATS AND VULNERABILITIES

This is another area where we will take our lead from the MBTA Police and from Tom McCarthy. The MBTA has recently been recognized as one of the most secure transit systems in the country and obviously knows its system and services—both the strengths and the vulnerabilities. During Mobilization, we will work closely with the MBTA Police to assure that our draft OSSCP specifically addresses the threats and vulnerabilities in the

MBTA commuter rail system (e.g., five movable span bridges, a major river crossing in Haverhill, MA, several common stations with intercity and subway services, a service that crosses a state line, etc.) rather than adopt a generic approach to the threats that appear in a commuter rail service. We will also look to the MBTA Police to instruct us in their methodology for assessing threats and vulnerabilities, compare it to the Hazard Identification program that we already utilize in the VRE Service (and that is included as Appendix 2-3) and incorporate the best practices from both into our draft plan.

3.A.3. SECURITY OF CUSTOMERS AND OPERATING PERSONNEL

The OSSCP will contain mandatory reporting procedures to include "who, what, where, when" for any potential and immediate threats/dangers to the MBTA Service. and communications protocols and procedures for responding to threats, incidents, accidents and/or any other form of emergency involving any aspect of the MBTA Service. , emergencies, etc.

This section of our draft plan will contain the specific controls that we will put in place to protect the customers on the trains and our operating employees. They will be developed jointly with the MBTA Police, and they will be part of a community outreach program conducted during Mobilization wherein we will introduce ourselves to community leaders and emergency responders throughout the MBTA Service, both to offer assurances about the coming transition and to ascertain that our communications protocols and procedures are harmonious with those in place and in effect in the communities where we will be operating trains.

3.A.4. AND 3.A.5. INTERNAL SECURITY AND OSSCP REVIEW AND APPROVAL

We will work closely with the MBTA to establish a Joint MBTA-KCS Peer Review Committee to conduct reviews of all security programs, practices, procedures, significant incidents, threats, and vulnerabilities:.

This committee will be responsible for the development of a process for immediate examination of significant incidents and for frequent (i.e., at least quarterly) internal security audits to maintain SSEPP compliance and measure the effectiveness of the OSSCP. The Peer Review Committee will also take the lead for our participation in audits and reviews by the FRA, FTA, DHS/TSA and the Commonwealth of Massachusetts

The Peer Review Committee will be the primary mechanism for reviewing, analyzing, auditing and measuring both compliance and effectiveness for our OSSCP. Our representatives to this Team will be led by Deputy Chief McCarthy, who will take responsibility for the development of the OSSCP, which will include, as mentioned above, an internal audit process, its submission to the MBTA for approval, and the incorporation of any MBTA comments/suggested changes into the draft document. Periodic reviews of plan sections and effective measurement of plan effectiveness will also be part of his responsibility.

We will also invite the MBTA Police — and any other MBTA departments involved in the system safety and security of the commuter rail system/ service — to participate in this review/audit process on whatever basis they deem necessary. As we envision this external review/approval process, we see it as similar to joint operational testing on someone else's railroad and/or to having the FRA come in and perform an audit. We view the MBTA Police in the same regulatory light in these matters as we do the FRA for the safety-sensitive programs which they regulate and audit frequently.

Other important issues to be addressed in the OSSCP include:

- What is Sensitive Security Information, to whom does it apply and how must it be handled (Presentation by the MBTA Police and Legal Departments):
- Organizational chart, including detailed descriptions of areas of jurisdiction, responsibility and accountability

- Roles and responsibilities of KCS managers relative to the work of the MBTA's:
  - Police Department
  - Safety Department
  - Railroad Operations Directorate
- Development and implementation of a comprehensive training program for all KCS employees to include:
  - "See Something, Say Something" program for employees and customers
  - Safety and security awareness training
- Planning for Emergency Drills and Exercises:
  - Participants, including MBTA safety, security and operations managers and KCS counterpart managers
  - Adherence to guidelines of MBTA's Homeland Security Exercise and Evaluation Program
  - Federal and state requirements for the performance of drills and exercises, including compliance with the KCS 49 CFR Part 239 Passenger Train Emergency Preparedness Plan
  - Development and conduct of full-scale emergency preparedness drills
  - MBTA/KCS joint participation in the evaluation, analysis, testing and evaluation of emerging technologies
- Implementation/application of the MBTA SSEPP:
  - Planning and preparedness meetings with the MBTA and other emergency response agencies to include, but not be limited to: terrorist attacks, severe weather (hurricanes, floods, snow storms, etc.), and major accidents on the MBTA Service. Definition of our role and responsibilities
  - In conjunction with MBTA Operations, plan and provide for a system of "bus bridges" to alleviate service interruptions
  - Planning and development of an evacuation plan to assist with the safe transportation of citizens from an established danger area at the direction of the MBTA Operations Control Center

These are the initial elements and numerous sections that will comprise our OSSCP, which will be delivered to the MBTA in draft form for review and approval within 90 days of NTP. The fully-developed draft OSSCP will present a comprehensive approach to system security and the role that our workforce will assume in support of the efforts of the MBTA Police. For the preparation of our draft plan, we anticipate using the approved APTA-Recommended Practice for the development of Security and Emergency Preparedness Plans (SEPP) template to draft the OSSCP. Following this format, the organization of the OSSCP would include the following elements:

I Overview
- Purpose
- Goals
- Objectives
- Mission statement
- Corporate approval/MBTA approval

II System Description
- System description and interdependencies

III Security Conditions, Trends & Capabilities
- As conveyed by MBTA Police
- Homeland Security Information Network (HSIN)
- PT-ISAC
- APTA
- BTS
- NTI
- All Safety Committee meetings to include Security as an agenda item

IV Threat Levels and Alerts
- Conveyed by MBTA Police
- Directives from DHS
- NTAS
- Daily operations to include countermeasures including:
  - Identifying unusual or out-of-place activity: reporting of suspicious packages, activities, persons
  - access control for facilities/stations/ vehicles implemented and enforced by employees, including denying access to authorized-only areas

- practicing "good housekeeping", removing obstacles
- promoting visibility of uniformed and badged employees
- lost & found policy

V Training

- SOPs for security-related duties for employees, including recognition, response, reporting of security events
  - All employees
  - Frontline employees
  - Supervisors and managers
  - Senior management
  - Emergency responders

VI Exercises and Drills

- Homeland Security Exercise & Evaluation Program (HSEEP)
- FRA 49 CFR Part 239
- MBTA-organized drills and simulations

VII Public Awareness

- See Something Say Something
- Announcements on-board trains/ at stations
- Lost & Found: Whose Bag is This?
- Pre-trip inspections: mechanical, operating crews

VIII Evaluation and Modification

- Audit process:
  - Plans, policies, procedures
  - Documented training curriculum, testing, monitoring
  - Drills, exercise, critique, after-action reports and corrective action plans
  - Access control
  - Physical security
  - Information technology
  - Sensitive Security Information

This approach to OSSCP development will be discussed with the MBTA shortly after NTP.

In addition, the General Safety Committee for Keolis for the U.S. has approved a System Security Plan for all U. S. and North American contract commuter rail operations. This document, which is included in its entirety as Appendix 3-2, is designed to be fully compatible with whatever security planning documentation is in effect at any agency to which we may be providing contract commuter rail operations and maintenance services. We will also draw from this document to strengthen and enhance our OSSCP and related security/emergency documentation for the MBTA service.

The MBTA Police will be invited to participate in the development of the security training programs which we will provide for our employees and subcontractors. Programs will include, but not be limited to:

- ***Emergency Response to Improvised Explosive Devices (IED) and Weapons of Mass Destruction (WMD)***
- Security Awareness for Commuter Railroad Employees. This course covers skill sets for observing, determining, and reporting activities, packages and substances that are suspicious or out-of-place and responds to a need for basic awareness training on security and terrorism.
- Operations Control Center (OCC) response to WMD Incidents. This course is intended for OCC and other key personnel to review, recognize and evaluate potential terrorist threats that may arise in their transit systems, and supply them with practical knowledge and response options, including how to distinguish between the characteristics of chemical, biological, radiological and explosive weapons, recognize key principles in responding to a terrorist attack involving WMDs and understand the role of rail OCC personnel in preventing terrorist attacks.
- Terrorist Activity Recognition and Reaction. This course is intended for transit employees who have direct contact with the public. The goals of the course are to provide participants with the knowledge and skills to:
  - Explain the importance of identifying and reporting pre-attack terrorist activity
  - Recognize the difference between normal, suspicious and dangerous activity

- Define their role in recognizing and reacting to suspicious activity
- Describe their immediate actions when confronted with dangerous activity

In addition, the FTA has developed two short security videos that will be used in security training:

- **The Mark.** A fictionalized version of a threat against a metropolitan transit system. It demonstrates to transit employees how asking the right questions and following their instincts when faced with suspicious and unusual circumstances could ultimately mean the difference between life and death.
- **System Security Awareness for Transit Employees/Warning Signs.** Video on the key aspects of system security for transit employees designed to increase the viewer's awareness of what to look for and what to do regarding suspicious activity, packages, devices and substances

3.B. DRAFT EMERGENCY PREPAREDNESS PLAN (EPP)

As required by Schedule 3.5, Section 4, of the RFP, within 90 days after NTP, we will develop a final EPP in accordance with federal regulations, contained in 49 CFR Part 239, which requires that railroads that provide passenger rail service must have an FRA-approved Passenger Train EPP. The requirements for this Plan include stipulations that the operator has in place, at all times, prompt, effective emergency planning and response resources to reduce both the frequency of occurrence and the severity of consequences (i.e., risk) of accidents. In addition, our EPP will comply with Homeland Security Exercise and Evaluation Program requirements. Our EPP for the MBTA Service will include all of the following elements:

Communication and Notification

- On-board crew members' prompt and accurate notification to the appropriate Control Center (generically referred to for this discussion as the OCC) and to passengers
- OCC to the appropriate emergency responders, internal agency and external agency notifications

Employee Training and Qualification

- Initial and refresher training and testing of on-board personnel (train and engine crews), including:
  - Rail equipment familiarization
  - Situational awareness
  - Passenger evacuation
  - Coordination of functions
  - "Hands-on" instruction concerning the location, function and operation of on-board emergency equipment

OCC personnel will receive training on appropriate courses of action for potential emergency situations. Training will also include:

- Familiarization with the train dispatching territories within the MBTA Service
- Protocols governing internal communications between appropriate control center personnel whenever an imminent potential emergency situation exists
- Emergency notification procedures — both internal and external

Joint Operations — Amtrak, CSX, Pan Am Railways

Each railroad hosting passenger train service will address its specific responsibilities consistent with their respective role, i.e., owner, maintainer, operator, etc. We will coordinate and communicate applicable portions of the EPP with all shared and joint system users in order to achieve an optimum level of emergency preparedness. One EPP addressing each party's responsibilities will be jointly adopted and implemented by all of the railroads involved in hosting and operating the MBTA Service.

Liaison with Emergency Responders

We will establish and maintain a working relationship with the on-line emergency responders by, at a minimum:

- Developing and distributing a training program for all on-line emergency responders who could

reasonably be expected to respond during an emergency situation, which would include railroad equipment characteristics, location of railroad facilities and communications interface
- Inviting emergency responders to participate in emergency simulations
- Distributing applicable portions of our current EPP at least once every three years, or whenever we materially change our plan, including documentation concerning our equipment and the physical characteristics of the line, necessary maps, and the titles and telephone numbers of appropriate railroad officers to contact
- Updating emergency contact information periodically

On-Board Emergency Equipment

Our EPP will cover the types and location of on-board emergency equipment and their inspection and maintenance procedures. This equipment will include, at a minimum:

- One flashlight per on-board crew member
- Back-up (redundant) communications
- Auxiliary lighting
- Fire extinguishers
- Pry bar

Special Circumstances

The EPP will address specific issues and considerations that may pose additional challenges in an emergency situation, including tunnels, elevated structures, remote locations, and shared and parallel rail operations.

Passenger Safety Information

This element of the EPP will describe our program for passenger awareness of emergency procedures, to enable passengers to effectively respond during an emergency. This includes our participation and involvement with MBTA on the posting of emergency instructions on both the railcar interior and exterior, as well as other means of providing safety awareness information, which may include:

- On-board announcements
- Ticket stock
- Timetables
- Station signs or video monitors
- Public service announcements
- Seat drops

Passenger Train Emergency Simulations

We will work together with the MBTA to design and conduct periodic full-scale emergency exercises to test our capabilities and identify where gaps and weaknesses exist in order to make continual improvements. Debriefings will be conducted immediately after the exercises to obtain clear recollection of the events, and a critique will follow in the form of an After-Action Report to include a Corrective Action Plan for improvements.

As an example of a recently-conducted emergency drill developed and staged by Keolis, Case Study 3-1 below provides details of a June 2013 simulated Chemical Biological Radiological and Nuclear attack in Lyon, France:

CASE STUDY 3-1: Chemical Biological Radiological and Nuclear (CBRN) attack Drill, Lyon Metro Station, June 2013

Drill Context

Following Interior French Ministry request, three drills about Chemical, Biological, Radiological and Nuclear (CBRN) attack have been performed within Lyon Area at several locations. An international approach has been chosen related to a tense geopolitical context (France - Italy committee in Dec 2012 in Lyon, European demonstration for the tunnel Lyon - Turin) with the participation of European members (Belgium, Germany, Spain, Italy and Portugal) and the coordination at European level by MIC (Monitoring and Intervention Control) in Brussels. Every year on the French territory 4 major exercises are performed related to CBRN attack. Source: http://www.sgdsn.gouv.fr/site_lang_en.html

Keolis Lyon made a proposal to be involved in one drill which was decided to be performed in TCL Metro network (Transports en Commun Lyonnais) at "Gerland station" line B, 12th of June 2013.

Main Objectives of the Drill

- Evaluate the chain of management from the Operator and Security authority point of view to deal with a major terrorist attack with chemical, biological and radiological components
- Set up the European organization of Civil Protection with the assistance of European members via MIC (Monitoring and Intervention Center) of Brussels
- Evaluate the implementation of massive decontamination plan
- Evaluate the capacity of the operational plan to integrate the International, National and local emergency services
- Evaluate the implementation of the new part of "ORSEC" plan: NOVI (1) and the tracking plan with a large number of victims
- Evaluate procedures and capabilities of taking care of victims contaminated or irradiated in hospital facilities

Keolis Lyon Drill Targets

- Evaluate Keolis tools of crisis management and the operational link with institutional tools
- Evaluate our capability to be integrated in the institutional emergency plan
- Evaluate the consequences of such critical event on the company's employees' behavior

Lyon Metro Station "Gerland" Drill

A massive chemical contamination in metro station area following a public demonstration (large crowd) with 500 victims.

The Drill has been prepared during 3 months from March to June in coordination with the Local authority by Keolis Lyon.

For the duration of the drills 3 stations were closed to the public and the traffic has been transferred to buses. It was a main issue for Keolis Lyon to deal with such a critical exercise in terms of workforce to be mobilized and to handle the traffic during such abnormal situations on the rest of the network (Metro, Tramway and Buses).

Keolis Lyon Participants — 22 People Involved — Senior Managers and High-Level Supervisors

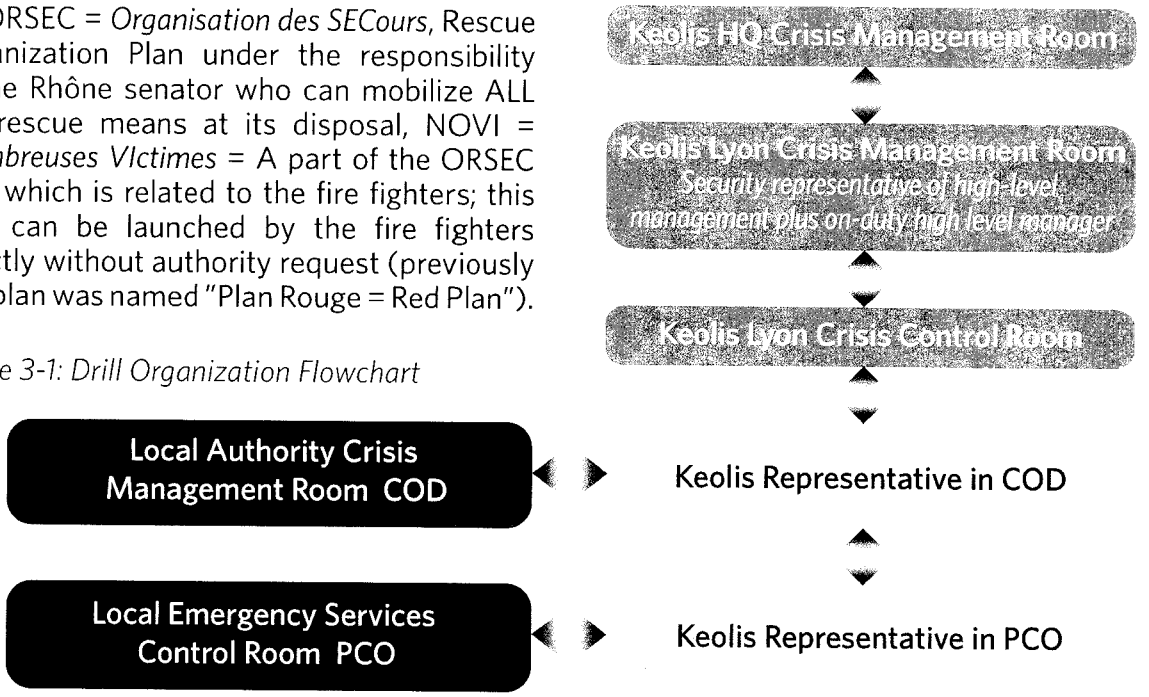
- 1 in COD Local Authority Crisis Management Room
- 2 in PCO Local Emergency Services Control Room
- 9 in Keolis Lyon Crisis Control room
- 10 in Keolis Lyon Crisis Management Room:
  the Safety representatives of Keolis Lyon Directorate

Participation of 2352 people including people acting as victims or terrorists.

CASE STUDY 3-1: Chemical Biological Radiological and Nuclear (CBRN) attack Drill, Lyon Metro Station, June 2013

(1) ORSEC = *Organisation des SECours*, Rescue Organization Plan under the responsibility of the Rhône senator who can mobilize ALL the rescue means at its disposal, NOVI = *NOmbreuses VIctimes* = A part of the ORSEC plan which is related to the fire fighters; this plan can be launched by the fire fighters directly without authority request (previously this plan was named "Plan Rouge = Red Plan").

Figure 3-1: Drill Organization Flowchart


Keolis HQ Crisis Management Room
Keolis Lyon Crisis Management Room
Security representative of high-level management plus on-duty high level manager
Keolis Lyon Crisis Control Room
Local Authority Crisis Management Room COD
Keolis Representative in COD
Local Emergency Services Control Room PCO
Keolis Representative in PCO

Feedback Experience of the CBRN Drill in "Gerland"

Keolis Lyon Management Crisis Room — Positive Points

- The management and the structure of action sheets were appropriate during the drill
- An identified person in charge to manage each action sheet is well appropriated, the other drill stakeholders contribute, check, enhance and validate the action sheet
- Dynamic and strong cooperation about the exchanges within the group
- Good general organization, efficiency of this organization
- Logistic was well organized
- Strong involvement of the participants within all the Keolis Lyon units
- Follow-up of the incident with the Keolis Lyon software tool: Netviewer, which provides and anticipates issues

Local Authority Crisis Management Room COD — Positive Points

- Large exchanges between the services involved in the drill
- A useful notes system before to fill in the drill daybook
- Quick entry of drill daybook, sharing of large amount of information in real time
- Sharing of COD daybook and Keolis Lyon Netviewer

Local Emergency Services Control Room PCO — Positive Points

- Good organization in PCO with an adapted computer and telephone logistics
- The room is well proportioned (space)
- Large and continuous exchanges
- A report every 15 minutes by the leader of PCO

Keolis Lyon is in progress to establish an action plan following the CBRN attack drill.

CASE STUDY 3-1, continued: Chemical Biological Radiological and Nuclear (CBRN) attack Drill, Lyon Metro Station, June 2013

Keolis Group Vision

Keolis Group has demonstrated a strong involvement regarding the Security issue for employees, passengers and general public with the drill in Metro station "Gerland."

Keolis Group has been involved at all the levels of chain management, from Paris headquarters with the Crisis Management Room to the Keolis Lyon employees, working on site and addressing such a critical event.

Keolis takes security very seriously: our Head of Security at HQ level was formerly the Head of Police for Air Border Protection, and the Head of Security in Lyon was formerly a Police Commander in Chief.

Keolis Lyon has responded appropriately to the request of French institutions, and our strong coordination and continuous exchanges about security issues between all the participants were deeply appreciated and emphasized.

The organization of Keolis Group through the different levels has demonstrated to the International, National and Local Authorities that Keolis Group can manage a critical event such as a massive traffic disruption in urban area.

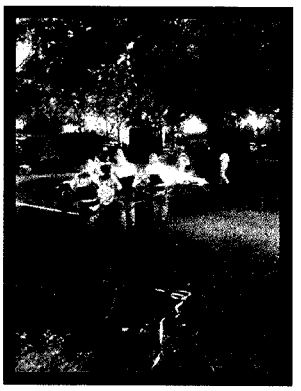
The Keolis Group will build upon this exercise to run additional simulations in other networks where we operate rail transport, such as Rennes on the metro. We will also have the opportunity to hone emergency procedures, as the military is considering running such an exercise in the city of Metz in 2014, where Keolis operates the public transport network.

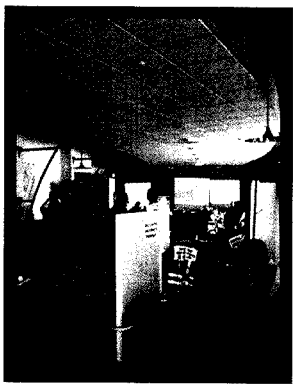
Please find some pictures of the drill in Lyon on the next page. Additional pictures are available on the link below:

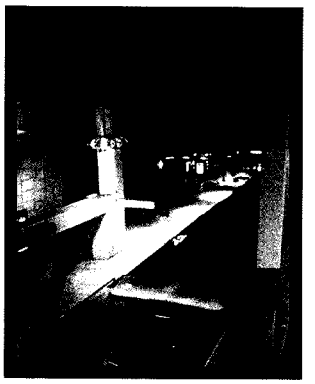
http://www.sipa.com/en/feature/2618970/lyon-exercice-nrbc/page/1/SN/NEWS

General Contact:

Laurence.fourcade@keolis.com, head of Knowledge Management







Operational Tests and Inspections

We will incorporate, as part of our Program of Operational Tests and Inspections (49 CFR Part 217), procedures that test the knowledge, skills and abilities of train and engine crews and train dispatchers in the relevant parts of the EPP. These procedures will include:

- Evaluating and critiquing employee response during table-top and emergency simulation drills and exercises
- Evaluating and critiquing employee response to "what if?" questions posed by the testing supervisor
- Refinement of employee and first responder training and emergency plans

At the VRE Service, we have broadened the application of our "217" program and consider it to be an integral part of our Quality program, providing an indication to our Transportation management where our personnel are performing up to the highest standards in the operation of trains, where lesser performance is being demonstrated, where additional training is needed to improve performance, etc.

Passenger Education / Awareness

This effort will include:

- Use of various promotional media to increase passenger awareness of hazards, including safely boarding and alighting from trains and minimum safe distance from station platform edge to wait for trains
- The prioritization of emergency evacuation routes when necessary to evacuate the train

We will develop and adapt relevant, tested safety policies and procedures to fulfill all of our safety duties and obligations, including compliance with all regulatory requirements. In formulating an EPP for the MBTA Service, we will also reference the APTA-developed Recommended Practices and Standards, including:

- APTA SS-PS-001-98, Standard for Passenger Railroad Emergency Communications
- APTA SS-PS-002-98, Rev 3, Standard for Emergency Signage for Egress/Access of Passenger Railroad Equipment
- APTA SS-PS-003-98, Standard for Emergency Evacuation Units for Rail Passenger Cars
- APTA SS-PS-004-99, Rev 2, Standard for Low-Location Exit Path Marking

We will also have our Director - Safety and Security as a representative on the appropriate APTA Safety Committees and the Railway Safety Advisory Committee (RSAC) to stay conversant with industry trends and best practices in the U.S., as well as to share our experience and perspective as an international public transportation contractor.

3.C. DRAFT EMERGENCY RESPONSE PLAN (ERP)

As required by Schedule 3.5, Section 5, within 90 days after NTP, we will develop a final ERP in accordance with 49 CFR Part 239 and applicable OSHA standards at 29 CFR 1910.38(a). In addition, our Plan will be coordinated with our Environmental Services subcontractor. The plan will be a way to document and organize employee actions during workplace emergencies such as conditions resulting from major storms, fires, other natural occurrences and any other events that require services of emergency response agencies that could disrupt the MBTA Service. With a properly trained workforce — one

in which employees understand their roles and responsibilities within the plan — the severity of employee injuries and damages to the facility during emergencies should diminish. Elements of this plan will include:

Means of reporting fires and other emergencies

- Procedures for fire and emergency reporting, including:
- A description of the preferred means for reporting emergencies, such as dialing 911, calling an internal emergency number, or pulling a manual fire alarm

Evacuation procedures and emergency escape route assignments

- An evacuation policy, procedures and escape route assignments so employees understand who is authorized to order an evacuation, under what conditions an evacuation would be necessary, how to evacuate and what routes to take
- Exit route diagrams to identify the escape routes to be used by employees from each specific facility location

Procedures to account for all employees after an emergency evacuation has been completed

- Procedures to ensure that everyone is accounted for after an evacuation may include procedures for designated employees ("evacuation warden") to sweep assigned areas before leaving the workplace or conducting a roll call in the assembly area and/or to assist others in an evacuation.

Rescue and medical duties for those employees who are to perform them

- The duties, responsibilities and employee positions assigned with rescue and medical tasks, such as the local fire department or hospitals, will be identified in the plan.

Names or job titles of persons who can be contacted for further information or explanation of duties under the plan

- The names, titles, departments and phone numbers of employees who can be contacted for additional information or clarification of some aspect of the plan will be kept updated by reviewing and revising them at least twice a year.

We have developed extensive crisis management skills in its other rail operations, believing that these skills are a key factor in the quality of its operations. Crisis levels have been established along with the appropriate response level. Our systematic approach to managing a crisis can be depicted through the lifecycle of a crisis shown below in Figure 3-2:

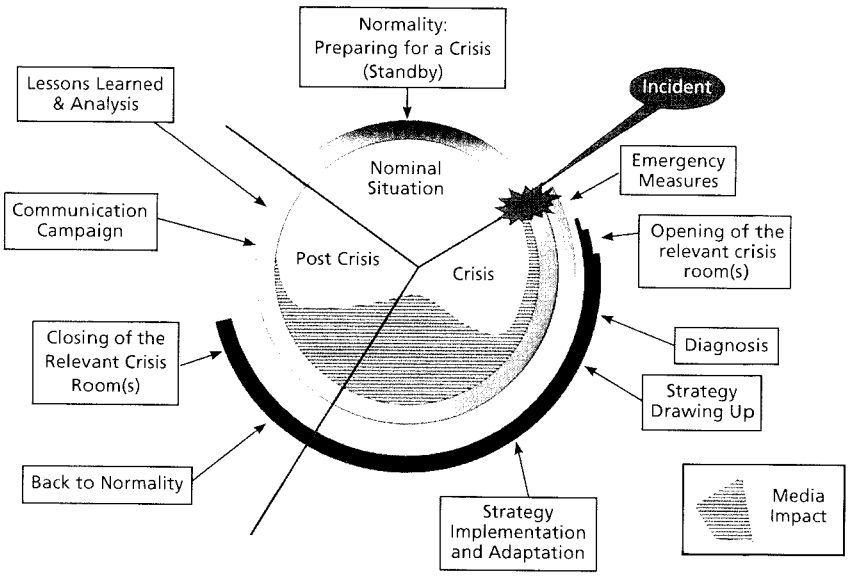


Figure 3-2: Lifecycle of a Crisis

Contingency Plan

Our mission is to provide safe and efficient rail transportation. In the event of a service disruption, we have a duty to respond to the disruption as promptly and as effectively as possible. We will strive to be operationally prepared to continue operations during any type of threat or emergency, and be able to effectively resume essential operations if they are interrupted. This can be accomplished by developing a viable, executable Continuity of Operations Plan (COOP).

COOP planning is a good business practice and part of our fundamental mission as the party responsible for providing an essential public service. Because of the current changing threat environment and recent emergencies, including acts of nature, accidents, technological emergencies and terrorist attack-related incidents worldwide, COOP capabilities and plans are essential.

We will use as guidance for our COOP the APTA SS-SEM-RP-001-08 Recommended Practice for a Continuity of Operations Plan, as well as the DHS/FEMA resources, training, templates and guidance developed for continuity of operations planning.

Our managers responsible for the development and implementation of the COOP will be trained in the following FEMA Emergency Management Institute's Independent Study Program courses:

Incident Management Training, Preparation and Capabilities

This section of our ERP will focus on how we prepare for and handle a crisis, starting with the provision of NIMS training to all relevant staff who may become involved in responding to and managing an emergency.

NIMS is a national systematic approach to incident management, which includes:

- ICS
- Multiagency coordination systems
- Public information

Because emergency management often requires the response and assistance of multiple agencies, practiced coordination is required to carry out the most successful response. NIMS training and implementation provide a common set of concepts, terminology and organizational processes that promotes effective and collaborative incident management. When properly practiced, it allows for a common understanding and interoperability of communications and information management between agencies and responders at all levels to prevent, protect against, respond to, recover from and mitigate the effects of incidents.

Homeland Security Presidential Directive-5 (HSPD-5) requires all Federal departments and agencies to:

- Adopt NIMS and use it in their individual incident management programs and activities
- Make adoption of NIMS by state, tribal and local organizations a condition for federal preparedness assistance (through grants, contracts and other activities)

As we have done for the employees engaged in the VRE Service, KCS employees and subcontractor employees involved in the MBTA Service will be trained, as appropriate to the position, on aspects of the National Incident Management System. Specific courses to be administered are described in the next section of this Plan.

Also, we will use the Federal Emergency Management Agency (FEMA) Emergency Management Institute's (EMI) Independent Study Program to accomplish the bulk of the initial NIMS training. We will also work with the Massachusetts Department of Emergency Management (MEMA) to conduct training and develop and participate in drills and exercises relevant to the commuter rail operation.

NIMS training will be an integral part of new hire employee training and refresher training, and train and engine crews must be operationally fluent in NIMS and able to apply the NIMS framework in an incident until first responders arrive on-scene.

Incident Notification

We will ensure that our accident investigation policies and procedures are in conformance with APTA Standard RT-S-OP-002-02 (2004), July 2005. This provides a common framework for rail systems to develop accident/incident investigation plans. We will include the following topics in our plans:

- Policies and procedures
- Investigation thresholds
- Notification
- Coordination with government or regulatory agencies
- Investigation process
- Training
- Analysis
- Post-accident reporting
- Follow-up activities

In the event of an incident, we will immediately inform the appropriate MBTA-designated representatives, pursuant to contractual requirements and MBTA's direction, and will respond to the incident as effectively as possible. We will prepare and submit all statutorily and contractually-required reporting subsequent to the incident.

We will develop and implement accident/incident internal and external notification procedures, including the following:

- ***Operations Control Center (OCC).*** All loss-causing accidents/incidents involving our personnel or agency property will be reported to the appropriate OCC, in this case CROCC and/or CETC, in accordance with the governing regulations, rules and procedures.
- ***Management, Supervisory and Emergency Response.*** We will notify appropriate management, supervisory and emergency response personnel in accordance with notification protocols developed in full compliance with the contract. Internal notifications will be made as soon as practicable.

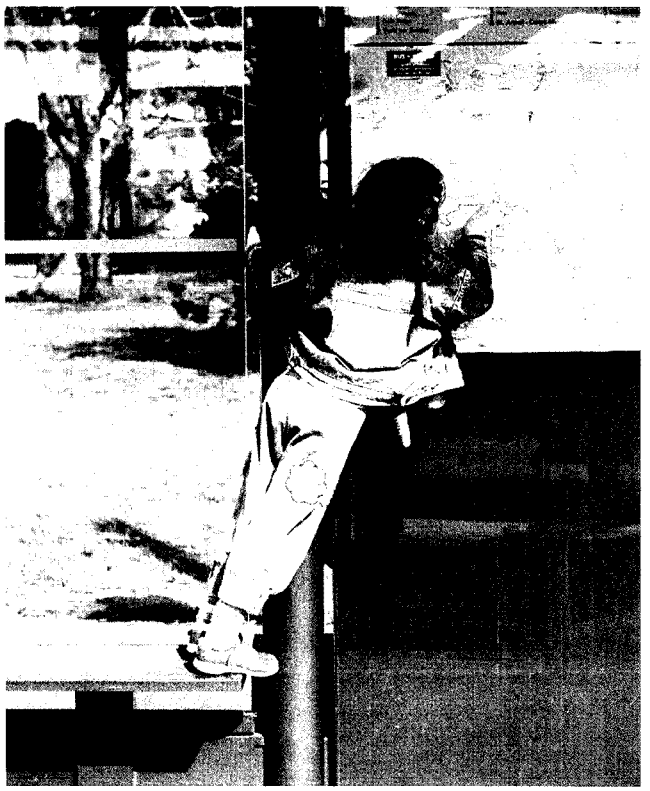
An interim written incident report will be transmitted to MBTA within twenty-four hours of the incident. A full investigative report, complete with root cause and corrective actions (if applicable), will be submitted to MBTA within thirty days of the incident.

Case Study 3-1 above provides an example of the types of emergency drills that we are familiar with and we anticipate full participation in all MBTA-arranged drills and simulations.

To strengthen our overall skills and prowess in the areas of emergency preparedness and emergency response, in addition to the orientation and familiarization training arranged through Deputy Chief McCarthy and provided by the MBTA Police, during Mobilization our managers will receive the following security and emergency preparedness/response-related training, including but not limited to:

- Federal Emergency Management System (FEMA) National Incident Management System (NIMS) IS 700 a: Introduction to the National Incident Management System
- FEMA IS-703.a: NIMS Resource Management
- FEMA IS-704: NIMS Communications and Information Management
- FEMA IS-1: Emergency Manager: An Orientation to the Position
- FEMA IS-100.b: Introduction to Incident Command System, I-100
- FEMA IS-100.PWb: Introduction to Incident Command System, I-100 for Public Works Personnel
- FEMA IS-200.b: ICS for Single Resource and Initial Action Incidents
- FEMA IS-201: Forms Used for the Development of the Incident Action Plan
- FEMA IS-208.a: State Disaster Management
- FEMA IS-230.b: Fundamentals of Emergency Management
- FEMA IS-235.b: Emergency Planning
- FEMA IS-546.a: Continuity of Operations (COOP) Awareness Course
- FEMA IS 547.a: Introduction to Continuity of Operations (COOP)
- FEMA IS 548: Continuity of Operations (COOP)

This list of training courses to be made available to our key managers is intended to be representative rather than exhaustive, and will include all of the courses — administered to the appropriate personnel — as specified in Section 14.1 of Schedule 3.5 of the RFP. Additional courses added as necessary, both during Mobilization and during the course of operation of the MBTA Service.



3.D. BEST PRACTICES SUPPORT

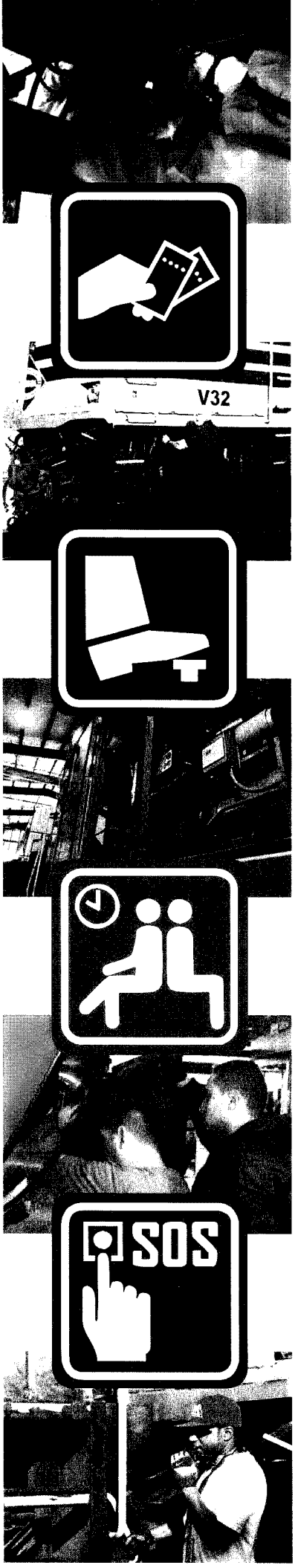
It is axiomatic throughout the public transportation industry that two of the most important elements of effective security, emergency preparedness and emergency response are communications and integration/ coordination of the resources available for the effort required. The best practice that we will bring to the MBTA Service in this public safety-critical area will be thorough, constant communications and complete integration of our workforce with the security programs, policies and procedures of the MBTA.

Through the efforts of our Security Liaison, Deputy Chief McCarthy, the safety culture, discussed in detail in Section 2 Safety Plan, which we will establish for the MBTA Service will have a strong, omnipresent security and emergency preparedness component to it. Through Deputy Chief McCarthy's work, our management team and our workforce will know and understand what the MBTA Police are trying to accomplish in their efforts to keep the entire MBTA Service safe and secure, and what our roles and responsibilities as the Operator are in this regard. We will support, augment, enhance, participate in and reinforce the MBTA Police programs to the greatest extent possible.

Our innovations, initiatives and best practices for improving the overall security, emergency preparedness and responsibility of the MBTA Service are summarized in the figure below:

Area	Initiative	Innovative	Best Practice	Beneficial to MBTA Customers	Cost Efficient	Support
Management and Workforce Involvement	Director - Safety and Security recognized as one of the "20 Rising Stars Under the Age of 40 in U.S. Railroading"	✓	✓	✓	✓	I.
	Former MBTA Deputy Chief of Police in the position of Security Liaison to the MBTA Police	✓	✓	✓	✓	I.
	Managers receive the full range of NIMS and associated emergency preparedness/response training		✓	✓	✓	3.C.
	A more secure environment on the trains for passengers and employees		✓	✓	✓	IV. and 3.B.
Governance and Objectives	Our Operator System Security Compliance Plan will be developed and implemented in compliance with the MBTA's System Security and Emergency Preparedness Plan	✓	✓	✓	✓	I. and II.
	Our 49 CFR Passenger Train Emergency Preparedness Plan will be developed in close concert with the MBTA and submitted for FRA approval		✓	✓	✓	II. and 3.B.
	KPI's related to system security developed with MBTA Police	✓	✓	✓	✓	III.
Training	Every employee will be trained to fulfill his/her role in the event of an emergency		✓	✓		IV. and 3.B.

Figure 3-3: Security Best Practices



SECTION 4
Mechanical Services Plan
Evaluation Factor Information

SECTION 4 — MECHANICAL SERVICES PLAN EVALUATION FACTOR INFORMATION

Contents

4. INTRODUCTION 2
I. Executive Summary 2
II. The MBTA's Objectives as We Understand Them 3
III. Our Assessment of the Current Situation 4
IV. The Results We Will Deliver 7
4.A. MECHANICAL SERVICES PLAN 8
4.A.1. Developing and Implementing Complete Maintenance Planning, Tracking and Recordkeeping Systems to Maximize Vehicle Availability and Reliability 12
4.A.2. Inspecting, Maintaining and Repairing of the MBTA Commuter Rail Fleet of Passenger Coaches and Locomotives 15
4.A.3. Maintaining, Operating and Repairing Non-revenue Rail Vehicles 20
4.A.4. Providing Daily Cleaning, Inspection, Fueling, Servicing and Light Repairs of Revenue Equipment 20
4.A.5. Providing Periodic Component Overhauls and Minor Upgrading Work, as Required 25
4.A.6 Enforcing Third-Party Warranties 26
4.A.7. Maintaining a Comprehensive and Up-to-Date Inventory Control System 34
4.A.8. Providing Information Management, Material Management, Performance Analysis and Reporting 34
4.A.9. Integrating New Technologies and Work Practices as Introduced by the Operator or the MBTA 44
4.A.10. Implementing, Operating and Maintaining FRA Approval Diesel Multiple-Unit (DMU) Cars 45
4.A.11. Operating the Re-Railing Crane 45
4.A.12. All Reporting Required by US DOT, FRA, EPA, MDTE, APTA, FTA as Well as Other Applicable Laws, Rules and Regulations 46
4.B. FLEET COMPOSITION MANAGEMENT 46
4.B.1. Maintenance Plans for Each Fleet 46
4.B.2. Maintenance Cost Schedules for Each Fleet 65
4.C. BEST PRACTICES SUPPORT 66

APPENDICES ..... Binder 2
4-1 Executive Summary — Pre-Proposal Property Condition Assessment Report
4-2 Mechanical Department Processes
4-3 Cleaning Regimen — Car Cleaning Standards

4. INTRODUCTION

I. Executive Summary

The Massachusetts Bay Transportation Authority (MBTA) fleet delivers the Greater Boston commuter services on a total of 14 lines north, west and south of the city. This is done with a fleet of 81 locomotives and 409 coaches. Improving the performance of this fleet through a well-organized, detailed, fact-based plan is a key component of our approach to operating this service. This document lays out our plan for **Moving Further Together**, attaining the highest quality and safety standards for the Mechanical Department.

The Four Cornerstones of our Approach to Fleet Maintenance

Throughout the past five decades, SCNF and Keolis have developed a systematic, employee- and customer-centered approach to rail transportation performance improvements. When we established Keolis Commuter Services (KCS) in North America, we applied this same approach utilizing four proven cornerstones:

- ***Ensuring employee and customer safety, with intensive training and development.*** Safety is of first importance in the discharge of our duties. We will empower managers and supervisors to ensure that a safe working environment for all activities is maintained at all times. The goal of a safe workplace is intrinsically linked with the additional goal of providing a safe environment for the public.
- ***Improving daily service reliability.*** We require that all of the preceding-day train delays be thoroughly understood and discussed during a morning meeting of operating executives. The Chief Transportation Officer (CTO), Chief Mechanical Officer (CMO) and Chief Engineering Officer will determine the root cause for each delay and will develop an action plan to prevent that type of delay from occurring in the future. The results of these root-cause analyses, which will be shared regularly with our General Manager and with the MBTA, will provide a fact-based platform from which to make investment and programmatic decisions.
- ***Utilizing reliability-centered maintenance (RCM) techniques.*** RCM will become the key strategy for improving the performance of the existing fleet in, first, meeting, and then exceeding Mean Distance Between Failure (MDBF) performance targets. We will utilize the approach outlined in the Operator Deliverable Requirements List (ODRL) to implement this strategy. It will rely on an Equipment List (ELIST) and a Maintenance Allocation Chart (MAC) for each class of rolling stock, and will develop a comprehensive list of Lowest Maintainable Units (LRU). The LRU list will be used to track failure data for the LRU and to develop preventative maintenance programs in order to minimize service delays and to provide a cost-effective approach to fleet maintenance planning. Finally, we will develop a life-cycle maintenance plan (LCM) for each class of rolling stock which reflects the ELIST and MAC and documents our overall approach to fleet maintenance.
- ***Continual focus on performance improvements through formal quality processes, relying on ISO processes and Lean Management techniques.*** We intend to implement a world-class Mechanical Department for the MBTA service. This implementation is built on four key actions:
  - Establish a state-of-the-art industrial organization, utilizing ISO standards
  - Undertake rigorous fleet analysis, and execute continuous improvements to the fleet
  - Optimize use of South Side facilities to minimize costly dead-head activity and
  - Develop and execute a plan to safely and efficiently introduce new equipment to the fleet

II. The MBTA's Objectives as We Understand Them

We understand that the MBTA's objectives for the Commuter Rail Service Mechanical Department are focused around the following main areas:

The MBTA's Objectives	Our Approach
To identify Proposers that have a plan that best maximizes equipment availability and reliability	**We will:** • Hire a high-quality, experienced Chief Mechanical Officer (CMO) • Introduce our Lean Management philosophy that focuses on performance and customer service through proper leadership, management and training • Implement a strong Continuous Quality Improvement plan that includes performance monitoring and enhancements at all levels • Engage a team of Engineering, Quality Improvement and Performance Improvement specialists to adapt the Lean Management approach in order to enhance and improve the Mechanical Services required on this property • Ensure that our employees have the proper training and tools to perform their jobs safely and efficiently • Ensure that we are in compliance with all Federal Railroad Administration (FRA) requirements, and that such compliance is maintained on an ongoing basis • Implement a three-tiered approach to car and locomotive cleaning
To ensure that Proposers have an integrated approach to customer and employee safety and hazard reduction	**We will:** • Develop and implement a Mechanical Department Safety Plan, which will be a component of the System Safety Program Plan • Provide both new hire and annual safety training program for all Mechanical employees • Develop a Mechanical Department Hazard Reduction Program based upon the System Safety Program Plan • Immediately address all hazards or unsafe conditions identified either in the workplace or in the customer environment • Assign overlapping safety responsibilities • Establish local Safety Committees
To ensure that Proposers have a mechanical services approach that preserves and prolongs asset life spans	**We will:** • Develop and implement a Reliability Centered Maintenance program that stresses continual improvements in both service reliability and rolling stock reliability • Implement processes of continuous improvement based upon both service reliability and specific rolling stock failures • Develop and implement Life-Cycle Maintenance (LCM) processes based upon Equipment Lists (ELIST) and Maintenance Allocation Charts (MAC) for each class of rolling stock • Integrate the work order fulfillment system with the materials management system and payroll system to provide a comprehensive assessment of ongoing cost to maintain each piece of equipment

The MBTA's Objectives	Our Approach
To ensure that Proposers have a plan for providing cost effective facility utilization, work scheduling and integration of new training and technology	**We will:** • Develop and implement a state-of-the-art Maintenance Management System (MMS) consistent and compliant with the requirements of the RFP • Ensure that the MMS system is fully integrated with the materials management system • Utilize a Work Order Management System to fully track both labor hours and spare parts applied to rolling stock during maintenance operations • Develop an IT-based production planning, controlling and reporting system to track units through the shops
To ensure that Proposers understand the economies of the integration of the new fleet as it is introduced to the Commuter Rail Services and the associated maintenance changes that will accompany changes to the fleet	**We will:** • Work closely with the MBTA and new rolling stock manufacturers to ensure the develop of life-cycle maintenance components (ELIST and MAC) • Coordinate with MBTA and new rolling stock manufacturers to ensure that our employees have received the requisite skill training to field a new fleet • Work with the MBTA to develop new fleet spare part plans and to ensure that those spare parts are in the inventory system when required • Consult with the MBTA to adjust labor costs as related to fielding of new fleets

III. Our Assessment of the Current Situation

During the proposal preparation process we have undertaken extensive work to understand the current situation. All available data has been thoroughly analyzed, and key data has been gathered, during the site visits and the 4-week-long fleet and maintenance facility Pre-Proposal Property Condition Assessment (PPPCA).

As a result of our analysis, we would draw the MBTA's attention to the following issues.

Safety and Quality

A comprehensive safety assessment is provided in our Section 2 Safety Plan. In addition, we understand that following an OSHA audit at the Somerville facility in October 2012, health and safety violations have been reported. During our visit of the Mechanical Department facilities, we identified several dangerous work situations such as operators operating a crane or working in the pit under the train without wearing their personal protective equipment.

In addition to the safety levels not being acceptable, the MBTA has expressed concern that the quality assurance and controls functions are currently incomplete or under-utilized (MBTA presentation, January 18, 2013). We have observed numerous examples of unsafe actions and clear indications that quality programs were not being followed by the current operator. We fully appreciate that the current maintenance safety and quality levels are not acceptable, and so we will tackle these high-priority issues from day one. We are thoroughly committed to high levels of safety and quality; both of these have always been critical to us in all of the properties that we manage.

Performance

Data show that the MBTA commuter fleet performs at a much lower level than the MBTA goals and that its performance has been plummeting over the 10 past years (see Figure 4-1, Locomotives and Coaches Mean Distance Between Failure - MDBF). Benchmarks show that this fleet is also performing at much lower levels than comparable fleets in the US. As an example, MTA Metro-North achieved 160,000 miles between failures on its fleet in 2012.

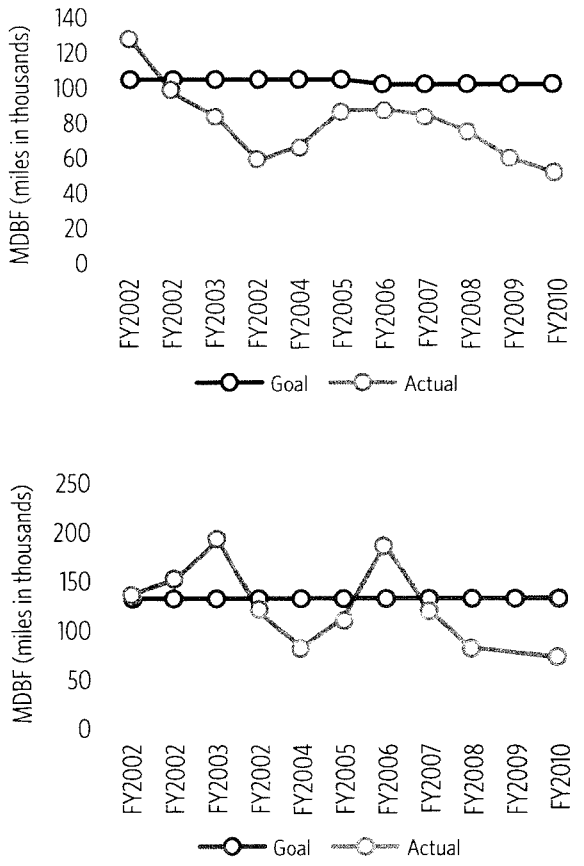


Figure 4-1: MBTA Locomotives and Coaches Mean Difference Between Failures (MDBF)

State of the Fleet

We have carried out an initial assessment of the condition of the fleet during the Pre-Proposal Property Condition Assessment (see Appendix 4-1 for the Executive Summary of the Pre-Proposal Property Condition Assessment report; we can make the full report available if MBTA wishes) undertaking a visual inspection of 35 locomotives and 180 coaches. We acknowledge that some of the inspected equipment is at the end of its useful life - among them, the single-level coaches and the F40PH-2 locomotives. However, we have identified a number of areas of concern - among them, improperly stenciled air brake dates, disconnected or inoperative trap door heaters, coach floor damage, locomotive truck dirtiness, oil leaks, windshield and car body corrosion - that we believe are due to improper maintenance or lack of adherence to generally accepted protocols. Finally, we have identified a subset of the single-level coach fleet that shows severe corrosion on car bodies and interior collision corner posts as shown below.

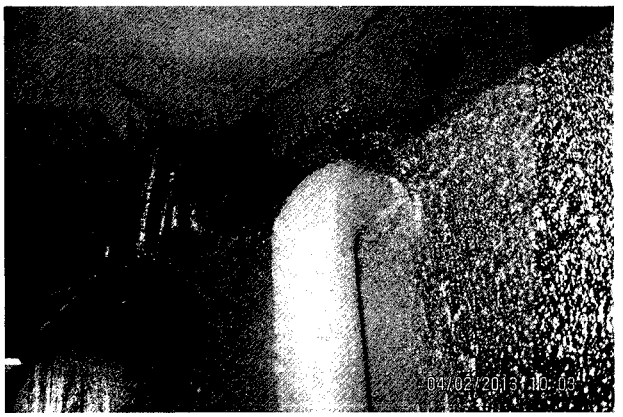


Figure 4-2: Underframe of Locomotive with Heavy Oil and Grease Buildup

Figure 4-3: Windshield Corrosion

Mechanical Department

We understand that medium and heavy repairs performed by the Mechanical Department are performed primarily at the Commuter Rail Maintenance Facility in Somerville. Some medium repairs and light maintenance are carried out at the Readville and Southampton Street facilities, and daily operations can be performed at the outlying layover facilities.

We have identified a number of weaknesses in the current organization, such as the following:

- Maintenance planning does not take advantage of consist-centered protocols, although the facilities are designed for such treatment.
- The maintenance function needs a holistic approach so that tasks and duties are proactively assigned to facilities (North Side and South Side) to ensure the quickest and most efficient repair and minimizing dead-head moves of equipment, which will result in cost savings.
- Maintenance planning and operations are based on FRA requirements, which in reality constitute minimal standards. Failure to adhere to higher standards, such as those standards in Reliability Centered Maintenance, precludes the ability to deliver strong fleet performance.
- The scope of responsibility for each manager is unclear and not relevant. For example, North Side Service & Inspections (S&I) operations are under the responsibility of the Deputy CMO, while South Side S&I operations are under the responsibility of the Mechanical Operations Director, resulting in minimal integration.
- General lack of attention to housekeeping and facility management indicate a lack of "ownership" in the workplace.
- Sloppy housekeeping within shops, poor work quality and on-going safety issues show that supervisors are not providing direction and guidance that a clean and orderly work environment is essential for safety.
- The Maintenance Management System (MMS) is not being used to its highest potential. The lack

CASE STUDY: Our Track Record in Fleet Maintenance

The French National Rail System (SNCF) and Keolis have a world-class track record in fleet maintenance. That is why we believe we are in a strong position to perform this activity successfully.

With its scale, its experience, and its acknowledged and exhaustive know-how, SNCF serves as an international benchmark for maintenance and engineering skills. As one of Europe's legacy maintenance players, SNCF has built up a body of knowledge that it puts to use in the interests of rail sector excellence.

These skills are backed by the enthusiasm of a 25,000-member team spread across SNCF's Mechanical Department. The Mechanical Department consists of design and research units (Rolling Stock Engineering Centre (CIM), Railway Testing Agency (AEF)) and the 38 Technical Centers (SNCF Shop complexes) situated around France.

SNCF maintains more than 1,000 diesel locomotives (ranging from 2 to 50 years old) and 6,500 coaches.

SNCF and Keolis have successfully transferred their skills in Keolis Virginia Railway Express (VRE) operations, where Keolis maintains 20 MP36 locomotives and 88 bi-level coaches (See Figure 4-4). Since the takeover of these operations by Keolis in 2010 and following a thorough audit carried out by SNCF maintenance experts, vehicle availability has grown up by 5% (reaching 97% for coaches) and fleet reliability achieved 31,000 miles between failures.

Figure 4-4: MP-36 in Keolis VRE operations

of regular input of labor hours is one example of this weakness. MMS cannot and will not be used to perform any form of time study, but allocating accurate labor hours to each piece of equipment provides a metric to assess the cost/benefit for segments of the fleet.

- There is a systemic disconnect between Transportation and Mechanical.
- While we acknowledge that the CRMF Truck Shop has been ISO9001 certified over the winter, all the above findings show that the Mechanical Department is far from compliant with all expected standards.
- The level of cleaning applied to the MBTA fleet is currently, in our estimate, significantly below that maintained by other commuter rail operations. Our customer surveys show that 27% of MBTA Service customers rate cleanliness as "Fair" or "Poor". We recognize that this is the reason why the MBTA has identified a much more robust cleaning regimen in the RFP.

IV. The Results We Will Deliver

Our commitment of leadership, transparency, responsiveness and managing change will be at the heart of our Mechanical Services Plan. Putting safety first, we will deliver the performance that riders of the MBTA Service deserve. Partnering with the MBTA and all other stakeholders, we will be **Moving Further Together,** delivering the following results:

Our results	Objectives
Improve Mechanical Department safety level	29% reduction in our employee on-duty rate by 2019 42% reduction in our employee lost time days by 2019 74% reduction of passengers injuries charged to the Mechanical Department by 2019 28% reduction of train accidents charged to the Mechanical Department by 2019
Improve fleet reliability	Exceed ambitious RFP requirements by reducing Mechanical Department delay minutes by 10% by December 2015 and by 30% by 2019
Improve fleet availability	+5% by the end of contract
Improve train cleanliness	Passenger satisfaction "overall coach appearance": 95% by 2016, 98% by 2019
Improve state of the fleet	Bring the fleet condition back to industry standards and keep it in the required condition until the end of contract
Reduce Mechanical Department environmental impact	Waste separation process: comply with ISO 14001 standards Reduce water consumption by 5% Comply with locomotive idling regulations
Ensure the successful introduction of the new MPI locomotives and Rotem coaches and ensure the MBTA takes full benefits of the savings generated by the new fleet	Comply with MBTA schedule Operate a safe and well-performing fleet from day one of introduction Reduce maintenance cost by 19% for locomotives, 9% for Rotem 1800 coaches, 3% for Rotem 800 coaches, 4% for Kawasaki 1700 (CTC-4) coaches and 3% for Kawasaki 700 (BTC-4, 4A, 4C) in comparison with the current fleet
Implement initiatives for providing cost-effective facility utilization, work scheduling and integration of new training and technology	Implement initiatives as developed in the plan in a timely fashion

Figure 4-5: Our Mechanical Department Results

These results will be delivered through a number of initiatives developed in the following sub-sections of this Mechanical Services Plan.

4.A. MECHANICAL SERVICES PLAN

General Approach

Our approach to implementing a world-class Mechanical Department within MBTA operations lies on four key actions:

1. Set up a state-of-the-art industrial organization
2. Undertake rigorous fleet analysis and carry out continuous improvements on the fleet
3. Optimize South Side facility use
4. Introduce the new fleet successfully

We will build on these four key actions to fulfill and go beyond MBTA requirements. We will develop point 1 in this section; points 2, 3 and 4 will be developed later in the relevant subsections.

First of all, we will rely on ISO standards to set up a state-of-the-art industrial management organization which sets out areas of responsibilities across the organization.

CASE STUDY

SNCF is a leader in implementing safety, quality and environmental systems and following best practice for continued improvement.

- ISO 9001 - all the 38 shop complexes and the Rolling Stock Engineering Department are certified;
- OHSAS 18001 - 26 shop complexes are already certified with a target of achieving 100% in the coming months; and
- ISO 14001 - all the 38 shop complexes and the Rolling Stock Engineering Department are certified.

Using the powerful and internationally-used ISO 9001 standards as referred to in Schedule 3.6 Quality, the scope of the Mechanical Department can be divided into three types of processes: production, support and management. For each process, one manager will be the process leader and will be accountable for the results of the process. 11 processes will be set up as detailed in Appendix 4-2. A comprehensive dashboard gathering all process objectives will be set up and monitored on a monthly basis. All the processes will interact as shown in Figure 4-6 on the next page.

Where process leaders are not part of the Mechanical Department organization - such as Materials Management and Purchasing - contractual relationships will be set up with the relevant department - Finance, in this case - with objectives and management processes to make sure results remain under the control of the CMO.

Through these processes, we will highlight deficiencies, manage the costs and ensure continuous improvement throughout our organization. The CMO will be accountable for deploying this new organization. During the mobilization, the Mechanical Department Quality Health Safety and Environment (QHSE) Manager will be hired to assist the CMO as a project manager. From day one of operations, he/she will work with the managers on a daily basis and will report to the CMO. On a weekly basis, a steering committee, chaired by the CMO and consisting of the CMO's direct reports, will monitor the progress of the deployment of the new organization. This organization shall be deployed within two years. It will be a key objective defined by the General Manager (GM) to the CMO.

Change management will be a key aspect of this initiative. During the deployment phase, we will organize site visits for our staff to state-of-the-art industrial organizations in the US. If the automotive industry is an obvious choice, we will endeavor for the visits to take place in the Boston area as shown in Figure 4-7 on the next page.

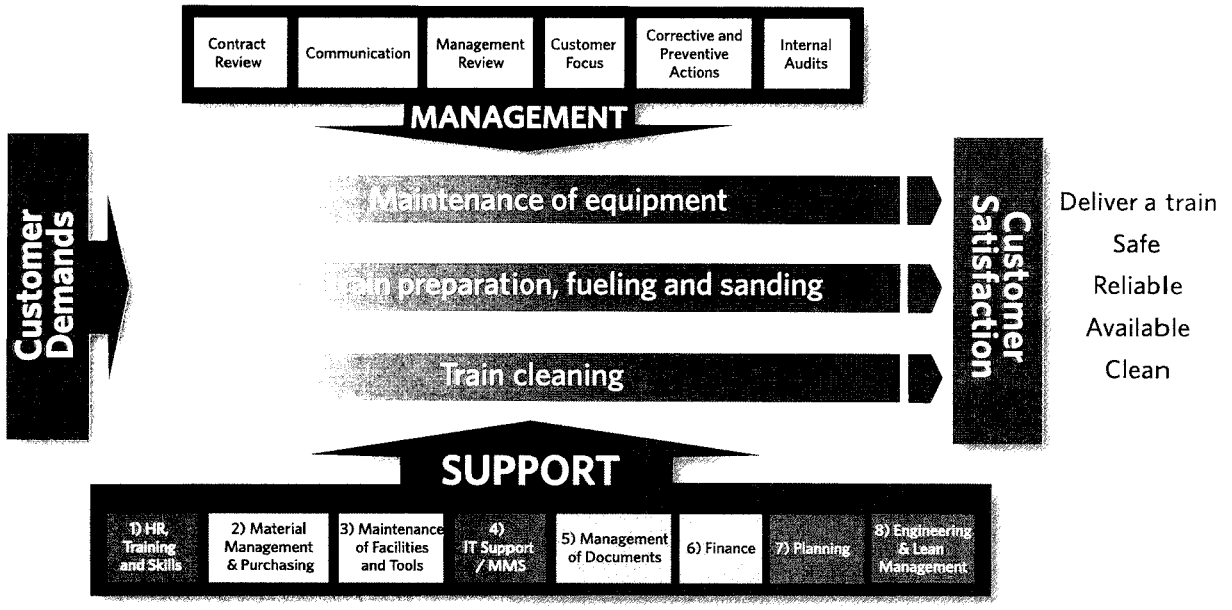


Figure 4-6: Our Mechanical Department Processes

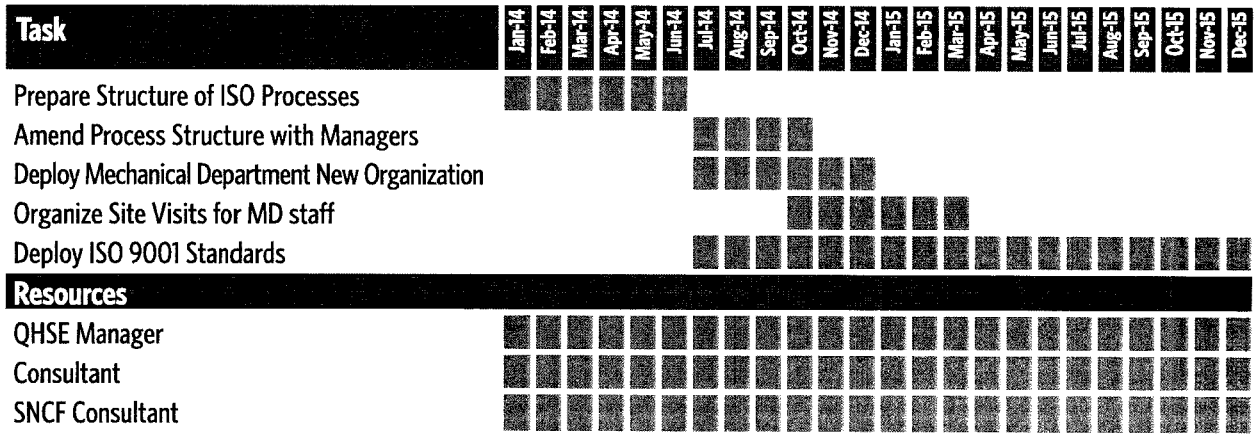


Figure 4-7: Timescale for ISO 9001 Deployment

The process leaders will review each of these processes every month, and each process leader will have a monthly meeting with the CMO to monitor the results.

The organization linked with these processes is described on the next page.

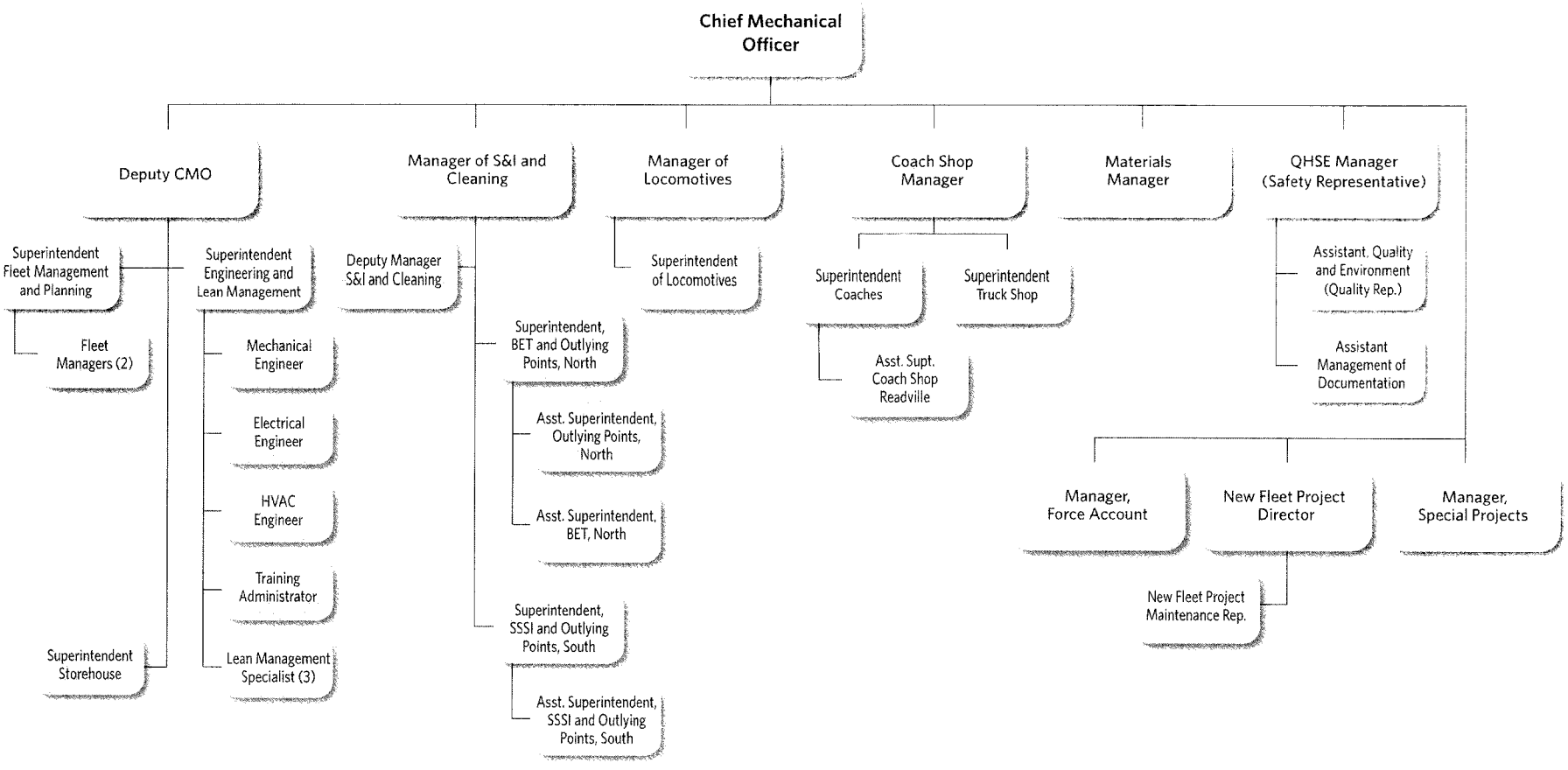


Figure 4-8: Mechanical Organization Chart

Change Management — Or How We Will Make Sure Our Improvements Are Successfully Implemented

From day one, we will begin the process of changing the company culture to focus on performance and customer service, two core values of both Keolis and SNCF. This change management will be a key activity in Mobilization, and we will continue to reinforce our company culture throughout the operational phase of the contract. Our change management strategy and specific initiatives that we will implement in order to achieve this cultural shift are fully described in Section 8 Management Plan.

In summary, managers will be at the heart of this strategy as they are the cornerstones of any successful change program. In the early months of the contract, all Mechanical Department managers will learn how to be inspiring leaders who live by the corporate values and culture we have defined. In addition to this, we will introduce an intra-department exchange program which will allow Mechanical Department staff to spend time in other departments, such as Transportation. This will help us to break down silos and ensure that our employees understand their role in the overall operation of the MBTA Service. This initiative will improve the way people in different departments work together to achieve our common goal: a safe, high-performance and customer-focused commuter rail operation.

Safety First

The Mechanical Department Safety Plans are a sub-set of the Section 2 Safety Plan. As discussed above, the current safety level is not up to expectations. Therefore, safety will be the first element in all the processes. With managers and supervisors empowered, a safe working environment for Mechanical Department activities will be maintained at all times to deliver safe trains. To improve safety and quality from day one of operations, objectives will be set and monitored by each manager:

- All operators must wear their safety personal protective equipment (PPE) at all times;
- Each Mechanical Department shift will commence with a daily safety briefing led by the foreman;
- Safety and quality checks must be carried out by supervisors after each maintenance operation; and
- Operators must carry out pre-service quality checks before releasing a train to transportation.

Moreover, managers will be asked to:

- Ensure rigorous compliance with our Blue Signal Protection program; and
- Investigate and prepare an investigation report for each injury reported by an employee.

These actions will be monitored on a weekly basis by the CMO, assisted by the QHSE Manager. The CMO will control these actions through spot checks in the workshops. Moreover, to bring managers back to the ground, they will be asked to commit to spend one full day per quarter in the shop. In addition, we expect that our managers will review each employee injury report, and they will ensure that a root-cause analysis has been completed to truly identify the cause of the accident so that we can eliminate all potential sources of injuries.

Moreover, the QHSE Manager will set up an annual safety and quality internal audit plan to check that all safety requirements are maintained at all times within the Mechanical Department to ensure the safety of our passengers, our trains and the safety of our staff. On a 3-year rolling basis, the internal audit plan will cover the whole scope of the Mechanical Department. These audits will be carried out by internal staff, either superintendents or managers. Having experience as an auditor will increase their commitment to promoting safety and quality within their own perimeter. All audit recommendations will be implemented and their efficiency reviewed by the process leader as part of the monthly process review.

These actions will deliver safety improvements as detailed previously.

CASE STUDY: SNCF Staff Safety

Over the past years, SNCF Mechanical Shops (38 shops across France) have empowered their managers on the ground and have deployed safety audits across all the shops. Among the great safety improvements achieved through this processes is the sharp and sustainable reduction of employee accidents shown below.

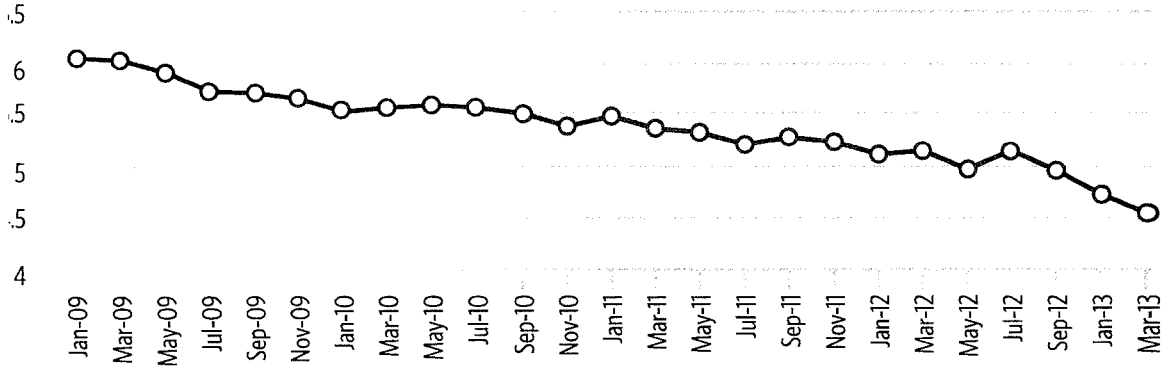


Figure 4-9: SNCF Equipment maintenance employee accident rate

The Mechanical Services Plan will integrate the twelve elements below into a single integrated approach to fleet maintenance

Our approach will be based on our successful experience in operating Melbourne Yarra Trams described on next page.

4.A.1. Developing and Implementing Complete Maintenance Planning, Tracking and Recordkeeping Systems to Maximize Vehicle Availability and Reliability

Our assessment of the current situation: We have identified the following weaknesses:

- Maintenance planning does not take advantage of consist-centered protocols, although the facilities are designed for such treatment.
- The maintenance function needs a holistic approach so that tasks and duties are pro-actively assigned to facilities (North Side and South Side) to ensure the quickest and most efficient repair, minimizing dead-head moves of equipment.
- Maintenance planning and operations are based on FRA requirements, which in reality constitute minimal standards. Failure to adhere to higher standards, such as those standards in Reliability Centered Management, precludes the ability to deliver strong fleet performance.
- There is a systemic disconnect between Transportation and Mechanical.

Our Plan: We recognize that planning is a key maintenance activity. As such, a planning team will be set up so that all maintenance, service, inspection and cleaning planning is comprehensively undertaken in this new team, which will be led by the Superintendent Fleet Management & Planning as shown on the next page.

Process	Maintenance Planning
Type	Support process
Scope	Plan all train S&I, maintenance and cleaning activities
Leader	Superintendant Fleet Management & Planning
Key Performance Indicators (KPIs)	Comprehensive KPIs will be set up in the leader dashboard, in particular: • Undertake 100% maintenance activities as per the Fleet Maintennce Plan before due date • Ensure that planning is compliant with availability requirements (consist compliance/seat availability) And: • Reduce by 10% empty coach moves for planned maintenance by developing consist locomotive and coach maintenance • Reduce unavailability caused by planned maintenance by 10%

Figure 4-10: Maintenance Planning Process

CASE STUDY: Yarra Trams (Melbourne - Australia)

In 2009, Keolis took over Melbourne Yarra Trams operations from Transdev. The fleet comprised 500 trams with an average age of 25 years old, 20% of these being beyond their original life length. When taking over the fleet and its maintenance, Keolis faced two major issues: (1) fleet reliability was very low, with a series performing as low as 1,250 miles between failures; (2) a thorough analysis of these operations led Keolis to believe that maintenance costs were 20% above usual standards.

To optimize this situation, Keolis undertook a full review of the maintenance operations and identified three areas of weakness:

- Poor organization: The scope of responsibility for each shop and manager was unclear, and workers were not properly trained to perform their activities.
- Poor maintenance regimen: Maintenance was carried out on a daily basis, focusing on corrective actions without a middle-term strategy, so that preventive maintenance was underperformed.
- Irrelevant overhaul strategy: Only scheduled and specific overhauls were being carried out, without anticipating any life extension.

Keolis set up a strategic plan focused on the following actions:

- Maintenance organization: The scope of responsibility for each shop and each manager is clearly identified, processes and procedures are implemented, and workers are properly trained. Moreover, maintenance is reallocated to appropriate maintenance sites to optimize dead-head moves.
- Maintenance regimen: Preventive maintenance is made the priority and benefits from continuous improvement, thanks to a newly set up Lean Management and Engineering team. All tram failures are thoroughly analyzed and corrective actions are deployed.
- Fleet strategy: Keolis becomes the Authority adviser to optimize the overhaul strategy, bringing its engineering expertise and increasing the availability ratio to retire the oldest fleet earlier.

The objectives are to be achieved by 2015: (1) availability +10%, (2) reliability +30%, (3) costs -20%. In 2013, maintenance costs were reduced by 10% and major failures have been reduced by 15%.

This four-person team will be charged with developing an on-going Maintenance Production Plan on a strategic (3-year), tactical (1-year), pre-operational (monthly) and operational (weekly and daily) basis. Each Friday afternoon, the Maintenance Production Plan for the following week will provide a detailed overview of planned maintenance activities for all work shifts for the seven-day period beginning the following Sunday. To the extent practical, this team will utilize what is called a consist maintenance principle, that is, in order to break the "run to failure" mode currently in place, our team will perform maintenance actions on an entire consist, rather than only on a single car within the consist. This will quickly improve fleet reliability, as detailed further in the Plan.

The Mechanical Department Planning Team will be the key interface between the Mechanical Department and Transportation, working in concert with the Transportation team. This shared responsibility will strengthen our service delivery and performance. On a daily basis, this team will track that trains are properly programmed to arrive and depart the maintenance facility as scheduled. It will coordinate with the Director of Train Movement and the CTO and the Transportation Manager twice a day to address any update or changes with regards to the delivery of train sets to or from maintenance. The planning team will coordinate with Transportation to identify any change, so that maintenance workload is maintained, and, if necessary, will develop alternate plans to ensure the maintenance forces are kept fully occupied. The team will maintain a searchable database of records of any and all maintenance operations carried out, and use that database (and the MMS program) to plan forward accordingly as shown next.

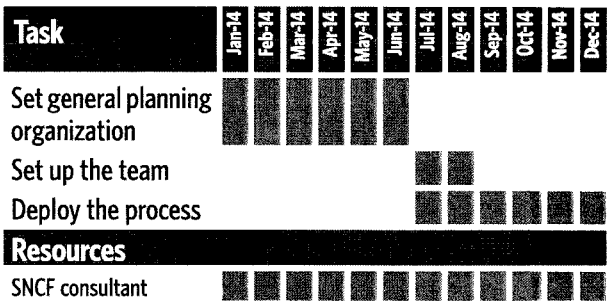


Figure 4-11: Mechanical Department Planning Team timeframe

It should be noted that we will plan maintenance according to the newly developed maintenance plans, going beyond FRA requirements and leading to significant performance improvements, as detailed further in the Plan.

We understand that Maintenance Planning is carried out and that records are currently saved in the MMS. The efficiency of this tool and of its use will be reviewed after the notice to commence service date. If our conclusions show that this tool is not up to the challenge, we will deploy standard planning tools as used within existing Keolis operations.

CASE STUDY: SNCF Fleet Supervision Deployment

In 2009, SNCF deployed a new integrated approach to fleet management. Within its Rhone-Alpes regional network, SNCF operates 5,600 trains per week with a fleet comprising more than 1,000 vehicles. The fleet is maintained in three main facilities. Each facility used to have its own planning team. These planning teams were not working in concert with Transportation. In 2008, it was identified that coordinating planning and facility use might lead to tremendous savings. In 2010, a single planning team was set up to plan all maintenance activities and manage the whole fleet in concert with Transportation. This action led to dramatic improvements: fleet irregularity has been reduced by 40% and fleet availability exceeds 91% as shown below.

Figure 4-12: Fleet regularity improvement

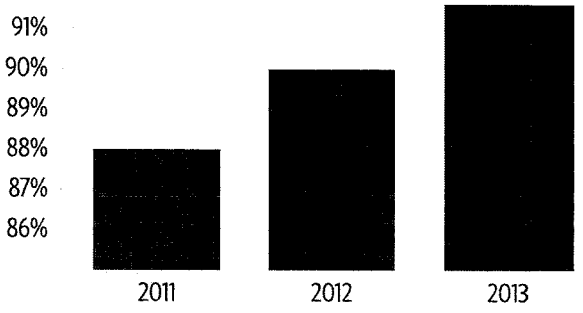


Figure 4-13: Fleet availability improvement

4.A.2. Inspecting, Maintaining and Repairing of the MBTA Commuter Rail Fleet of Passenger Coaches and Locomotives

Our assessment of the current situation: The main points of our assessment are the following:

- MBTA maintenance is mainly undertaken in the CRMF maintenance facility, while South Side shops can carry out minor operations on coaches in Readville and inspections in SSSI. Daily inspections are undertaken in 11 end-of-line layovers.
- Maintenance operations are focused on FRA requirements, failing to deliver strong fleet performance.
- Untidy shops, poor quality and safety issues show that supervisors are not on the ground to manage and control workers. Moreover, some CRMF facilities need to be refreshed.
- The MMS is not filled accurately (very little workforce data).

Our Plan: All of our activities will be undertaken incompliance with the all of the RFP's technical requirements, includinginspection criteria and condemning limits as well as the timely delivery ofeach ODRL item. These activities will be undertaken in compliance with the Maintenance of Equipment process as discussed below. These activities will be undertaken in compliance with the *Maintenance of Equipment* process as shown on the next page.

The maintenance program per class of equipment is described further in this Plan. These Maintenance Plans include initiatives to strengthen the existing maintenance program so that the equipment meets the performance targets.

Reliability Centered Maintenance will become the key strategy for improving the performance of the existing passenger equipment in, first, meeting and then exceeding Mean Distance Between Failure (MDBF) performance targets.

Utilizing the approach outlined in the Operator Deliverable Requirements List (ODRL),

Process	Maintenance of Equipment
Type	Production process
Scope	Manage the maintenance of locomotives and coaches
Leader	Deputy CMO — assisted by Locomotive Manager & Coach Shop Manager
Key Performance Indicators	Comprehensive KPIs will be set up in the leader dashboard, in particular: • Safety indicator • Reliability target per type of vehicle • Availability objectives

Figure 4-14: Maintenance of Equipment Process

particularly the *Equipment List* (ELIST) and the *Maintenance Allocation Chart* (MAC), each class of rolling stock will develop a list of Lowest Repairable Units (LRU). Failure data will be tracked by LRU and used to develop preventative maintenance programs in order to minimize service delays and to provide a cost-effective approach to fleet maintenance planning.

A strong training program will be set up. In addition to all FRA mandatory training, which will be provided on a regular basis to our staff, we will institute a thorough review of specific staff skills after the notice to commence service date. An external equipment expert and the HR Department will carry out the diagnostic, interviewing 100 staff including managers. They will then build a training program accordingly. Four days per worker and staff per year will be dedicated to the additional non-mandatory training program throughout the contract duration as shown below.

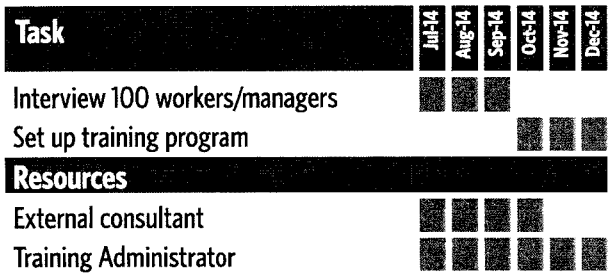


Figure 4-15: Training Timeframe

We have already identified three main areas of training, which include (but are not limited to):

- Compulsory training (FRA and other regulations)
- Technical training
  - Enhanced maintenance regime
  - More efficient trouble-shooting process - "fix it at first"
  - Enhanced skills for locomotive maintenance in Southampton
  - New fleet introduction
  - Enhanced cleaning regime
- Organization and management
  - Lean Management
  - Engineering process
  - Quality management

Maintenance operations are currently undertaken in the CRMF locomotive and coach shops. In particular, locomotives operating on the South Side need to be brought to CRMF every 92 days for periodic inspections and maintenance (see Section 6 Transportation Plan). To reduce these costly moves, we have developed a plan to carry out locomotive 92-day inspections in SSSI. The Southampton shop is currently available two shifts a day (4pm - 12pm, 12am - 8am) on a weekday, and three shifts a day during the weekend. We propose to perform locomotives' 92-day inspections beginning on Wednesday at 4pm; this method will allow the workforce to be fully engaged for a 5-day week (see Figure 4-16 on the next page).

Knowing that a locomotive 92-day inspection is performed on two shifts, and assuming that 40% of inspected locomotives require an additional shift for corrective maintenance, five units can be inspected per week, which means that all locomotives operating in the South will be 92-day inspected in SSSI, reducing sharply the transfers between the South and North sides.

To implement this initiative, we will:

- Define spare parts requirements and set up a reduced inventory in SSSI for inspection and light corrective maintenance
- Transfer Mechanics from CRMF/BET (Boston Engine Terminal) locomotive workshop to SSSI
- Transfer switching crews to SSSI

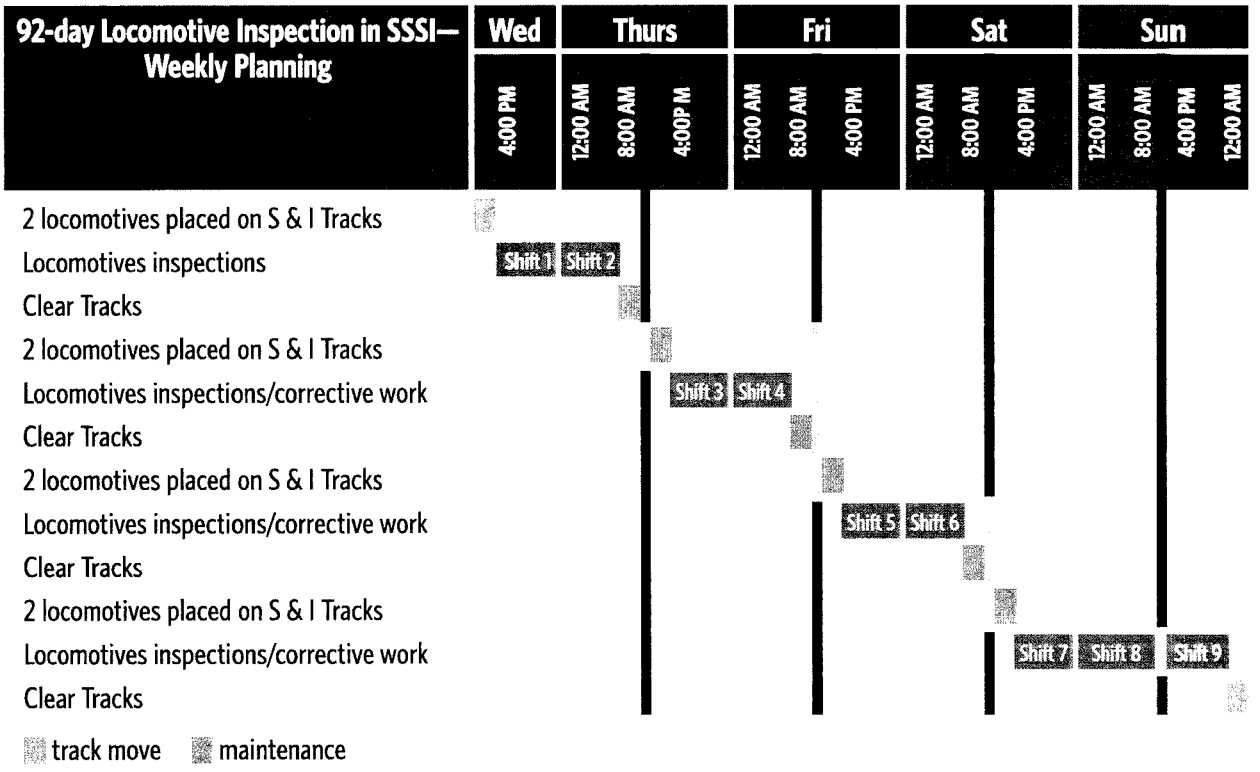


Figure 4-16: SSSI locomotive 92-day inspection weekly planning

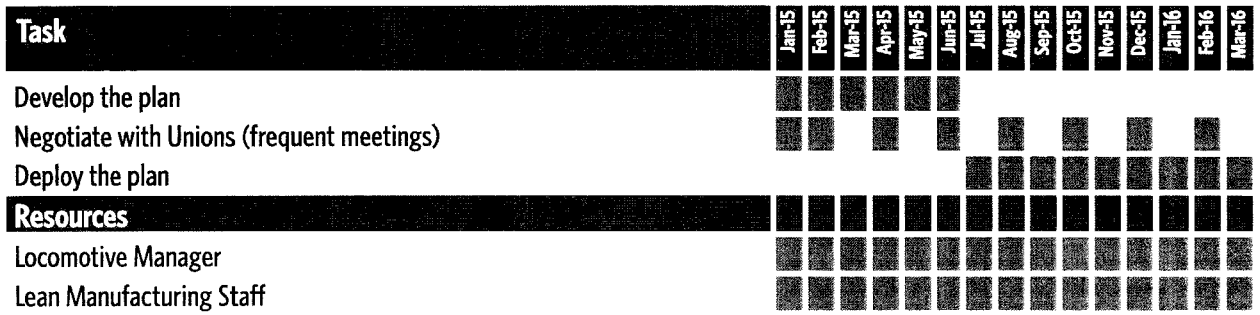


Figure 4-17: SSSI Locomotive 92-Day Inspection Timeframe

The locomotive manager will be in charge of managing this project, working closely with the HR Department to deal in a professional manner with staffing plan modification through negotiations with unions. As a result, we will save more than 120 deadhead moves along Grand Junction from the South Side to CRMF/ BET as shown above.

We will set up a four-member Mechanical Department Engineering Team in charge of analyzing fleet defects and ensuring that the return-on-experience process delivers sustainable reliability improvements. This team will work closely with shop managers and senior workers on the ground.

We will set up a four-member Lean Management Team to improve production procedures in the workshops. Lean Management is an industrial management philosophy which ai ms at preserving value and eliminating waste. We will bring MMS

Figure 4-18: Four-Member Lean Management Program timeframe

CASE STUDY 4-5: Lean Management Team delivers productivity improvements in SNCF Romilly Truck shop

The SNCF Romilly Facility contains a workshop which rebuilds the TGV (French High Speed Train) trucks. In 2012, the SNCF Romilly Facility CMO asked the Truck Shop Manager to reduce the costs by $260k per year. To achieve this target, the Truck Shop Manager, supported by a Lean Management staff, launched a program to reduce the cycle time from above 6,000 hours to 4,750 hours per train set (13 trucks per train set).

The problem was thoroughly analyzed using the Define, Measure, Analyze, Improve & Control (DMAIC) methodology (see Figure 4-19).

Figure 4-20 shows how this approach led to a significant cycle time reduction for the train set trucks being rebuilt in 2012.

This led to $182k savings due to the reduction of trucks in the process on top of the recurrent annual $260k savings.

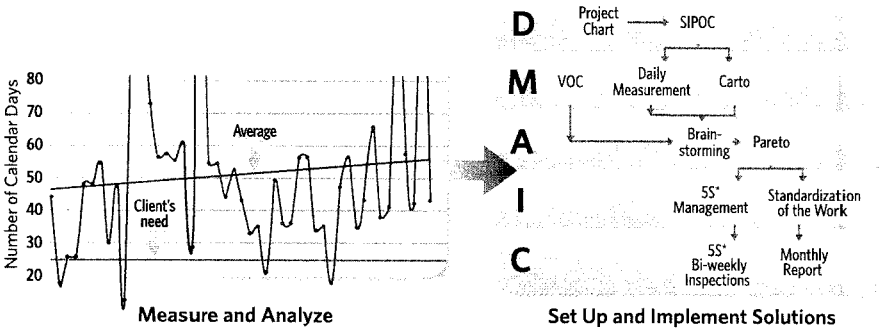


Figure 4-19: Analysis of the Truck Cycle Time

* There are five primary 5S phases: sorting, set in order, systematic cleaning, standardizing, and sustaining. Also known as Sort, Straighten, Sweep, Standardise and Sustain.

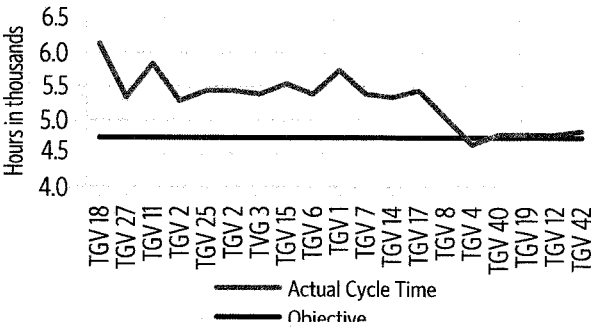


Figure 4-20: Truck Overhaul Cycle Time

back in full use by dealing with the unions to properly report hours worked and use it as a production analysis tool to support improvements. MMS reports will be provided to managers to monitor costs and economic performance. The Lean Management Team will help shop managers to define and implement Lean Management initiatives for managers to meet their economic targets. This team will be actively engaged on the ground not only to optimize organization, but above all to help change people's mindset and behavior, promoting the "work smarter, not harder" philosophy. This will lead to productivity savings throughout the Mechanical Department organization as shown in Figure 4-18.

Additionally, our Pre-Proposal Property Condition Assessment conclusions lead us to undertake the following actions to improve the CRMF safety, cleanliness and organization immediately after the notice to commence service date (See Figure 4-21).

The Shop Superintendent (or equivalent) will be responsible for implementing this plan. On a day-to-day-basis, he or she will be accountable for keeping their shop areas safe and in good, clean condition. The Lean Management Team will help implement 5S methodology where required. 5S is the name of a workplace organization method developed in Japan that uses a list of five actions: Sorting, Straightening, Systematic Cleaning, Standardize, and Sustain. The list describes how to organize a work space for efficiency and effectiveness by identifying and storing the items used, maintaining the area and items, and sustaining the new order. The decision-making process comes from a dialogue about standardization, which builds understanding among employees of how they should do the work. Objectives will be implemented in all the production process dashboards (See Figure 4-22).

Location	Pre-Proposal Property Condition Assessment Conclusions	Action
CRMF	All shop equipment (including but not limited to: wheel true machines, drop tables, car lifts, oil delivery systems, oil removal systems, overhead cranes, material handling equipment, etc) requires regular and ongoing maintenance	Develop a plan and assign responsibility to maintain equipment to OSHA and OEM specifications
CRMF	Grease and oil in S&I Area Pits(3)	Clean grease buildup alongside wall and floor
CRMF	Grease and oil in lower level of locomotive shop	Clean oil buildup in area of used oil recovery system
CRMF	Sloppy and random material storage	Set up a general organization of material stored on shop floor, utilizing a standard protocol, across all facilities

Figure 4-21: CRMF upgrade undertaken after the notice to commence service date

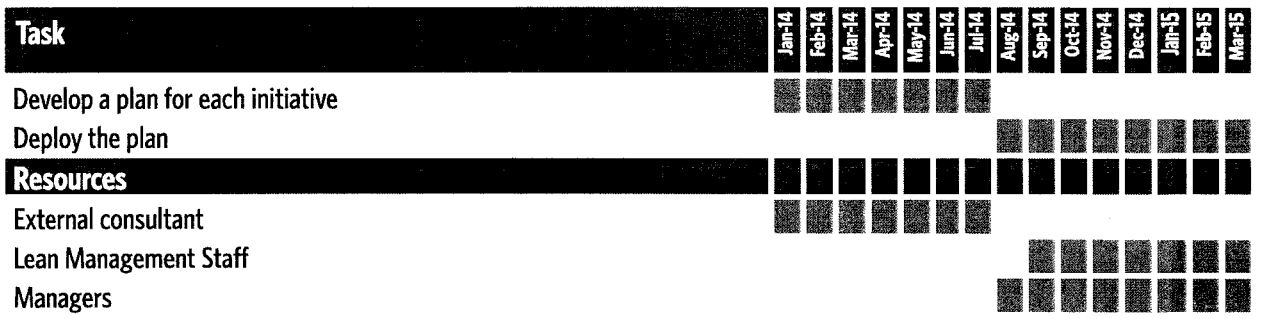


Figure 4-22: Health, safety, cleanliness and organization timeframe

4.A.3. Maintaining, Operating and Repairing Non-revenue Rail Vehicles

Our Assessment of the current situation: The MBTA maintains six switch engines, which are utilized for equipment transfers, house moves, MOW work trains and other non-revenue moves. The MBTA has a fleet of flat cars, gondolas, side dump cars, bottom dump hoppers, snow plows and a caboose. In total, the MBTA rosters 65 pieces of non-revenue equipment. This non-revenue freight car fleet is maintained by a designated group of carmen. The random sample of equipment inspected during the Pre-Proposal Property Condition Assessment indicated that a portion of this fleet is inoperable at this time.

Our Plan: The maintenance of the six switch engines will be undertaken in the locomotive shop under the same processes as the revenue locomotive fleet. This activity will be under the responsibility of the Deputy CMO. Moreover, a program to "right size" the work equipment fleet will be undertaken. A joint analysis will be done with the Engineering Department to confirm what equipment is needed to support the Engineering Maintenance Program. With that knowledge, the Mechanical Department will determine to repair or acquire cars to meet the need, dispose of unneeded or defective work equipment, or some combination thereof. This activity falls under the responsibility of the Deputy CMO.

4.A.4. Providing Daily Cleaning, Inspection, Fueling, Servicing and Light Repairs of Revenue Equipment

4.A.4.i. Cleaning the Revenue Fleet

Assessment of the current situation: The cleaning level of the MBTA fleet is currently poor. Customer surveys show that 27% of customers rate cleanliness as "Fair" or "Poor" (see Section 7 Customer Service). We recognize that this is the reason why the MBTA has identified a much more robust cleaning regimen in the RFP.

Our Plan: Train cleaning activities will be carried out according to the *Train Cleaning* process as shown in Figure 4-23.

Process	Train Cleaning
Type	Production process
Scope	Carry out all train cleaning activities
Leader	Manager of S&I and Cleaning
Key Performance Indicators	Comprehensive KPI will be set up in the leader dashboard

Figure 4-23: Train Cleaning Process

One manager will have overall accountability for all S&I and cleaning operations. This means that the responsibility to deliver train sets properly serviced and cleaned to Transportation on a daily basis is under the responsibility of a single manager who has accountability for all elements of the process.

To ensure the highest level of customer satisfaction, every aspect of customer interaction must be flawless. What is experienced through the senses - particularly sight and smell – must provoke a positive image, resulting in favorable reactions to every ride. We will develop and implement a detailed and comprehensive set of procedures to meet cleaning standards.

There are four different levels of coach cleaning, and three levels of locomotive cleaning as shown below.

Coach Cleaning	
Class A	Every 30 days
Class B	Every 3 days
Class C	Every day
Walk-through cleaning	Once a day

Figure 4-24: Coach Cleaning Regimen

Locomotive Cleaning	
Class A	Every 368 days
Class B	Every 92 days
Class C	Every day

Figure 4-25: Locomotive Cleaning Regimen

We will consider all facets of the cleaning and servicing operation, including identifying those cleaners who offer the greatest opportunity for improvement. Issues identified will be addressed through employee engagement and involvement, skill development of both supervisors and craft employees, and attitude and motivation adjustment. The aim is to develop a "continuous improvement" environment to ensure that the customers experience and recognize the improvements in the cleanliness of MBTA trains. We will build upon the current car cleaner training program, and make changes to it to accommodate our new approach. This approach will include skills training, introduction of new procedures and field observation and instruction for the current car cleaners, to demonstrate new techniques and cleanliness expectations.

As part of the effort, during the six-month Mobilization period, while working side-by-side with the current contract manager, we will complete a diagnostic assessment. This process uses state-of-the-art techniques, such as diagnostic surveys, structured interviews, critical incident observations, and Q-sort analysis, to collect, validate and evaluate information on current conditions, including strengths and weaknesses of current protocols.

Once the current protocols are clearly benchmarked, we will use that benchmark as a baseline for change. Improvement recommendations can then be made that include anticipated impact and potential return on investment (ROI). The diagnostic assessment will rely heavily on the input of current employees. Using Peer Technical Committees sessions, employees (both rank and file and management) will have the opportunity to provide their ideas, suggestions, and constructive criticism so the cleaning standards can be adjusted and improved to take advantage of the experience of this group.

While the new cleaning regimen specified in the RFP will upgrade significantly the cleanliness of the fleet, it will require a significant increase in the number of coach cleaners to perform the work as structured. Therefore, recognizing that the MBTA will appreciate any cost-efficient initiative, we would like to propose an alternative coach cleaning regimen, which we believe will deliver the expected results with a fraction of the additional expenses of the RFP plan. As the coach class B and C tasks are similar, we recommend strengthening Class A cleaning and reducing the emphasis on Class B cleaning. Additionally, we believe that Class A cleanings could be done on 92-day intervals. The new coach cleaning regimen would then be as shown in Figure 4-26.

The timeframe for this initiative is shown in Figure 4-27 on the next page. A detailed description of the proposed cleaning regimen is provided in Appendix 4-3.

While reaching the targeted cleaning level, this initiative will also lead to a significant reduction of the annual fee. This optimized cleaning regimen will be implemented upon MBTA approval only.

	Current cleaning regimen	Cleaning regimen as per RFP	RFP	Our optimized coach cleaning regimen
Heavy periodic cleaning	Every 180 days	Class A	Every 30 days	Every 92 days Strengthened class A
Pre-service cleaning	Every day	Class B	Every 3 days	
Midday cleaning	Once a day	Class C	Every day	Every day
–	–	Walk-through	Once a day	Once a day

Figure 4-26: Our Proposed Value-For-Money Cleaning Regimen

Figure 4-27: Cleaning Regimen Timeframe

Using train washing-machines efficiently is a key requirement for delivering clean trains. We have identified that, when using these washing machines, locomotive engineers are often driving through the machine above the required speed, thus not allowing the train to be properly cleaned. We will review the washing machine process to make sure these facilities deliver the expected outcomes.

Another important component of our program would be to put the entire fleet through a one-time cleaning regimen after the notice to commence service date to bring the fleet up to our expected standards at the start of the contract. This extra "scrub gang" work could be done by an outside contractor or by current coach cleaners as an overtime cleaning project.

All cleaning activities will be recorded in the MMS.

Quality controls are necessary to ensure the highest standards are achieved continuously. This type of control is particularly important when the tasks being completed are redundant, and can become monotonous. We will implement a Quality Control Program that will include the following elements:

- The foreman in charge of the cleaners (and laborers) completing the scheduled cleanings (A, B, or C) will inspect the cars and locomotives at least one hour prior to scheduled dispatch time and, using a standard checklist, will note any areas that do not meet standards. The foreman will then arrange for any and all deficiencies to be corrected.
- A team of Quality Control managers (spot riders) will travel various routes anonymously and, using a standard checklist, will note any areas that do not meet standards and report findings to the designated person/department (see Section 7 Customer Service Plan).

Customer satisfaction is a key performance indicator in determining how well the MBTA is performing in relation to long-term goals. A major contributor to this KPI is how passengers view the cleanliness and comfort of the cars they ride in. As part of the coach and train cleaning process, we will thoroughly analyze all customer inputs, including random customer surveys performed on a regular basis, and develop corrective actions to address identified deficiencies.

To ensure continuous improvement, our Lean Management Team will set up a cleaning performance analysis and reporting tool designed to meet the unique needs of the MBTA. This tool will provide the Manager of S&I and Cleaning with the ability to measure, monitor and improve the cleaning performance. The tool will:

- Establish performance standards for all tasks;
- Track actual performance against the established standards, and identify problems before they cause major issues;
- Use opportunities and lessons learned to make improvements;
- Schedule employees who do not meet performance standards for additional training and one-on-one direction;
- Provide management with ongoing statistics, including actual performance versus desired

performance for all tasks, improvements over time, and benchmark performance against other commuter rail operations; and
- Identify specific changes and new processes needed to maintain and improve performance.

By using two approaches — the diagnostic assessment and the performance analysis and reporting system — we will measurably improve the car cleaning process, leading to higher customer satisfaction, employee engagement and cost and time savings, for the benefit of the MBTA.

As a result, we will:

- Improve customer satisfaction from the current "Overall Coach Appearance" rating of 91.9% to 95% in 2 years; and make further improvement to 98.0% within 5 years; and
- Improve lavatory perceptions from the current level to 85% in 3 years.

4.A.4.ii. Providing Inspection, Fueling, Servicing and Light Repairs of Revenue Equipment

Our assessment of the current situation: The main points of our assessment are the following:

- Daily cleaning, inspection, and servicing are undertaken in BET, SSSI, Readville, and in 11 layovers.

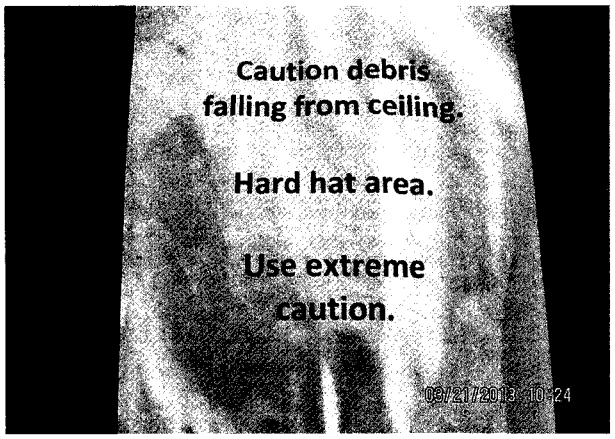


Figure 4-28: SSSI Facilities Present Serious Safety Risks

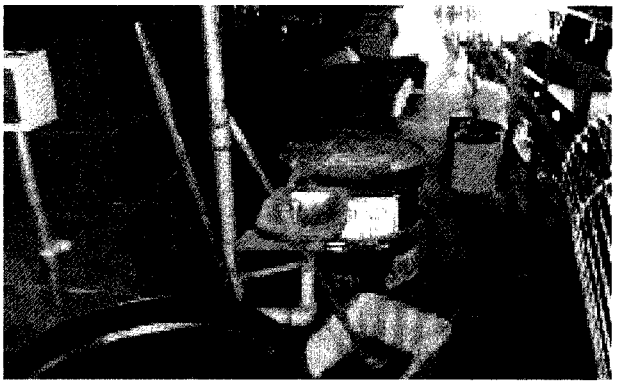


Figure 4-29: SSSI Emergency Eye Wash Station Inoperative, Dirty and Obstructed by Material

- As shown in Figures 4-28 and 4-29, we have identified during the Pre-Proposal Property Condition Assessment a number of issues in SSSI and layover facilities, which we propose to fix immediately after the notice to commence service date (see Summary of Executive Summary of the Pre-Proposal Property Condition Assessment report in Appendix 4-1; we can make the full report available if MBTA wishes).

Our Plan: Inspection, fueling, servicing and light repairs will be undertaken as part of the S&I, Train Preparation process as shown next.

Process	S&I, Train Preparation
Type	Production process
Scope	
Leader	Manager of S&I and Cleaning
Key Performance Indicators	Comprehensive KPIs will be set up in the leader dashboard, in particular: • Safety indicator • On-time train sets delivery to Transportation • Consist and seat compliance for the delivered trains • Reliability

Figure 4-30: S&I, Train Preparation Process

The scope of this activity covers all daily inspections and train preparation operations, including fueling and sanding. As part of our new organization, a single manager will be in charge of this activity both on the North Side and on the South Side. During the Pre-Proposal Property Condition Assessment and in random paid trips on regular commuter runs, we have observed that the level of maintenance and cleanliness is not uniform, and that standard protocols either do not exist or are not uniformly applied. Having a single manager in charge of these functions will bring efficiency and consistency to the process. Daily Cleaning aspects are detailed earlier in this Plan.

During our site visit, we noticed that a pit is being built in the Pawtucket layover and we fully agree with the necessity of this improvement. We feel that the pit being built to inspect the train sets - especially the Kawasaki and Rotem coaches - will improve the work product from that facility and help to bring the condition of the fleet to a higher standard by allowing more complex work to be accomplished at this location.

Additionally, we have identified major facility issues during the Pre-Proposal Property Condition Assessment — including significant health and safety concerns within the SSSI — which could put maintenance production at risk. We propose to address these concerns immediately after Commencement Date. In addition to issues at the SSSI, we identified several issues at Readville that we propose to address immediately after Commencement Date as shown in Figures 4-31 and 4-32.

Readville Shop		
Location	**Pre-Proposal Property Condition Assessment conclusions**	**Action**
Readville Shop	All shop equipment (including but not limited to: wheel true machines, drop tables, car lifts, oil delivery systems, oil removal systems, overhead cranes, material handling equipment, etc.) requires regular and on-going maintenance	Develop a plan and assign responsibility to maintain equipment to OSHA and OEM specifications
Readville Shop	Sloppy and random material storage	Set up a general organization of material stored on shop floor
Readville Shop	Wheel true machine is an old Simmons-Stan Ray with a link belt chip disposal system. The maintenance of this machine is less than adequate.	Clean and service wheel true machine

Figure 4-31: Actions to Be Prepared in Readville During Mobilization and Implemented Immediately After the Notice to Commencement Date.

Southampton S&I immediately after Commencement Date		
Location	**Pre-Proposal Property Condition Assessment Conclusions**	**Action**
Southampton S&I	• All shop equipment (including but not limited to: wheel true machines, drop tables, car lifts, oil delivery systems, oil removal systems, overhead cranes, material handling equipment, etc.)	Develop a plan and assign responsibility to maintain equipment to OSHA and OEM specifications
Southampton S&I	• Entire shop in poor physical condition	Clean and paint entire shop including pit areas
Southampton S&I	• Poor general lighting	Renew ceiling and pit lighting

Southampton S&I immediately after Commencement Date, continued		
Location	**Pre-Proposal Property Condition Assessment Conclusions**	**Action**
Southampton S&I	• Overhead crane	Clean, inspect and service
Southampton S&I	• Running rails	Evaluate and repair running rail securements
Southampton S&I	• Two car wash machines are in poor condition. A lack of maintenance is apparent. • Car wash pumps and mechanical systems show corrosion and deterioration. • Car wash runoff causes unsafe floor conditions and corrosion to both the facility structure and running rail attachment.	Upgrade car wash machines
Southampton S&I	• Upper deck corrosion	Repair corrosion and defective concrete decking
Southampton S&I	• Facility exhibits considerable issues with the structure of the building (roof and ceiling)	Evaluate and provide recommendation for repair

Figure 4-32: Actions to Be Prepared in SSSI During Mobilization and Implemented Immediately After Commencement Date

Location	Pre-Proposal Property Condition Assessment Conclusions	Action
All Layover Yards	Standby Ground Air Systems: air dryers are not in place, or not functioning as intended, causing air brake problems or failures	Inspect and repair Air Compressors and Air Dryers. Install Air Dryer system in yards with portable Air Compressors where necessary.

Figure 4-33: Actions to Be Prepared in the Layovers During Mobilization and Implemented Immediately After Commencement Date

Finally, we have noted that the standby air systems are not consistent in all yards. We have a concern with the lack of air dryers at some locations, as detailed further in this Plan. We propose to solve this issue with the following action (Figure 4-33):

This Plan will be initiated by the CMO during Mobilization, and Engineering Department personnel or third party contractors will repair or install as required immediately after Commencement Date.

4.A.5. Providing Periodic Component Overhauls and Minor Upgrading Work, as Required

Assessment of the current situation: Section 3.3 of the RFP defines MBTA Full Vehicle Overhaul as the responsibility of the MBTA. The same section defines all other "overhauls" as the responsibility of the Operator. Periodic major Component overhauls on items such as Prime Movers, HEP units, traction motors and trucks will be performed as indicated in the Life Cycle Maintenance Plan. Minor Lowest Repairable Unit (LRU) upgrading work can be performed as part of the overhaul process itself when, for example, a specific LRU has been upgraded and can easily replace an existing assembly.

Our Plan: We are committed to managing the entire fleet in a disciplined, proactive manner as described in this plan. The development of off-property full vehicle overhaul programs is the responsibility of the MBTA, and these types

of programs are handled through a separate MBTA bidding process and not within the operator's scope.

In the context of a Life Cycle Maintenance Plan built upon the ELIST/MAC philosophy, an "Overhaul" is defined as actions required to restore an item to a completely serviceable/ operational condition as required by maintenance standards in appropriate Original Equipment Manufacturers (OEM) documentation and other technical publications. Overhaul does not normally return an item to "like new" condition. Therefore, in the context of the Mechanical Services Plan, non-MBTA full vehicle overhauls are the direct responsibility of the operator. Examples of major overhauls that are completed at the operator's expense are: Traction Motors, HEP Engines and Generator Sets, Locomotive Air Compressors, Coach Condenser Units, Coach Evaporator Units, Coach HVAC Units, Coach Tread-Brake Units and Brake Actuators.

It should also be noted, however, that such components may also require "rebuild" actions when any particular unit is damaged beyond a potential overhaul type action. In both cases, the operator will handle these as either Repair and Return or Warranty Defects as described further in this Plan.

The second issue for overhauls is the prevention of in-service failures through an extensive campaign of identifying milestones in a component's life cycle and ensuring that each component is quickly brought into the life cycle maintenance program. There will be, for example, prime movers that should have been overhauled earlier and are beyond their useful life. In order to positively affect their performance, these units will have to be handled outside of their regular maintenance plan in order to bring them into a state of good repair.

During our Pre-Proposal Property Condition Assessment conducted during the procurement, we observed a number of both locomotives and coaches which we consider in need of attention to bring them up to a state of good repair. This effort will require a number of special maintenance initiatives in order to address these issues. The scope and the timeline to implement this work is described further in this Plan in Figures 4-51 and 4-52. The need to address these issues will not weaken our systemic approach; instead it will optimize the effectiveness of the systemic approach.

Periodic Component overhaul will be integrated into the maintenance plan. Moreover:

- We will use our thorough knowledge of rolling stock management to assist the MBTA in defining specifications for fleet and component overhauls to provide the MBTA with high value for money.
- We are prepared to undertake overhauls and component upgrades through the process in making specific agreements with the MBTA for the completion of this work.
- We will proactively engage the MBTA and propose upgrades on the fleet when we believe that doing so is supported with a strong business case.
- We will use the MAC and LRU process to integrate periodic component overhaul into the maintenance process.
- The MAC charts will specify both the period and the extent of the overhaul effort.
- MAC charts and life cycle maintenance plans will be established for the Lowest Repairable Unit (LRU) overhaul. These charts will be used as the basis for determining the direct labor charges and extent of work, if performed "in-house." The MAC charts will specify both the period and the extent of the overhaul effort.

CASE STUDY: SNCF 46-year-old diesel locomotives BB67300 maintenance improvement

The BB67300 locomotive is a diesel locomotive put in service in 1967 (see Figure 4-34). SNCF operates a fleet of 30 of these locomotives on its South-East regional network. In 2009, a delay of 5 years in the replacement of this 46-year old fleet led SNCF to define a plan to prolong its life beyond its original specifications.

Cost and Reliability Issue

In 2009, SNCF faced a tricky situation:

- Fleet reliability had decreased by 40% in the past 3 years
- Maintenance costs had increased by 40% in the same period
- SNCF had to keep using the fleet until 2015, which was far beyond the fleet original life length

SNCF identified three main causes for this situation:

- The fleet original life cycle has expired
- The fleet operates mass transit services with frequent stops, which are mechanically demanding
- Prime movers and cooling systems are not in a state of good repair

Therefore, SNCF developed an optimized plan for the fleet to operate efficiently until its planned life end. This plan was focused on two key actions:

- Reinforce the prime mover overhaul maintenance plan, adding refurbishment work on cooling systems
- Anticipate these overhauls by one year to bring the fleet to a state of good repair in a short time frame

As a result of this plan, SNCF achieved the following results:

- Maintenance costs kept under control (see Figure 4-35)
- Fleet performance remained above the target - Mean Distance Between Failures (MDBF) improved (see Figure 4-36)

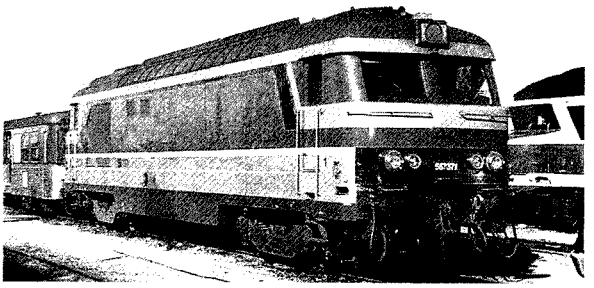


Figure 4-34: BB67300 in a French Yard

Figure 4-35: BB67300 Maintenance Cost Control

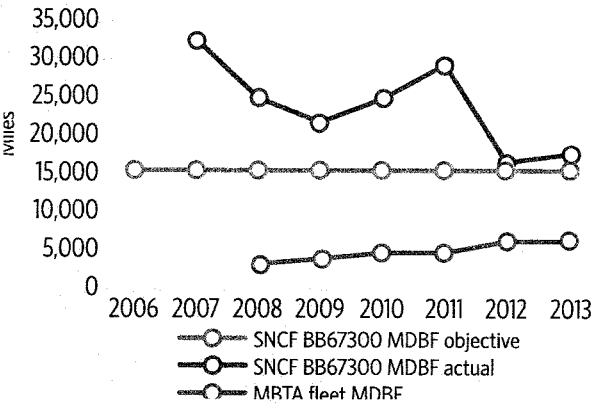


Figure 4-36: BB67300 Performance

Year	Country	Details	Manufacturer
2013	United Kingdom	26 EMUs being introduced on the Southern Franchise	Bombardier
2007-2013	France	200 diesel locomotives introduced (BB75000 series)	Alstom
2011	United States	20 diesel locomotives introduced in VRE	MPI
2010	Germany	18 EMUs introduced in the Maas-Rhein-Lippe Netz franchise	Stadler
2009	United Kingdom	29 High Speed Trains introduced in the Southeastern franchise	Hitachi
Since 2008	France	171 mass transits EMU being introduced in the Greater Paris area	Bombardier
2008	Germany	25 EMUs introduced in the Hellweg Netz franchise	Stadler
2007	France	100 Control Trailer Cars introduced	Alstom
2006	United Kingdom	51 DMUs introduced in the Transpennine franchise	Siemens

Figure 4-37: Some of SNCF and Keolis New Fleet Introduction Experience

4.A.6 Enforcing Third-Party Warranties

Assessment of the current situation: MBTA is leading the new fleet procurement process. New locomotives and coaches, as well as overhauled coaches, will be introduced during the contract period.

Our Plan — New Fleet Introduction

During the contract period, 40 new locomotives, 28 control cars and 47 trailer cars will be introduced. Keolis and SNCF have significant experience introducing new fleets into service worldwide, especially in the US where we became familiar with the US operational and safety processes when introducing the VRE new fleet. Moreover, we have extensive experience working with a wide range of manufacturers (see Figure 4-37 above).

New fleet introduction is not only a Mechanical project. It involves all components of operations. Therefore, the CMO will call upon the New Fleet Project Director's services to set up an integrated project team (see Figure 4-38), gathering the following packages:

- Delivery monitoring
  - Acceptance process
  - Performance requirements
- Maintenance preparation
  - Prepare/Upgrade Mechanical Department facilities
  - Purchase appropriate tools
  - Set up Training Plan for Mechanicals
  - Develop Maintenance Regimen/Plan
  - Develop Maintenance Production Plan
- Infrastructure preparation

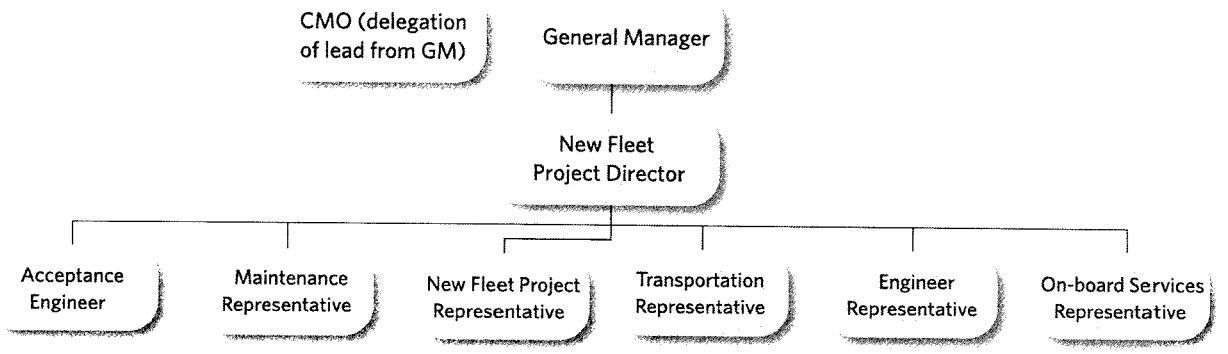


Figure 4-38: New Fleet Introduction Project Organization Chart

  - Adapt or lengthen layovers where necessary
- Operations preparation
  - Train set and locomotive engineer rostering
  - Adapt train rosters to site stabling possibilities
  - Define operational procedures, including those applying to downgraded situations
- Driving services
  - Purchase a simulator to train locomotive engineers
  - Set up a sound training program
- On-board services
  - Set up a sound training program for conductors

We believe that performance growth and locomotive engineer training are the two main risks of new fleet introduction. We propose a proactive partnership with the MBTA and the manufacturers to deliver the highest value to this program. We will take full advantage of the fact that our CMO candidate, Paul Garnett, used to work for MPI.

Performance growth: We believe that the early involvement of the operator with the manufacturer is key to introducing a new fleet successfully. Therefore, from day one, we will enter in a working partnership with Rotem and MPI. To make sure that the trains are performing correctly when first put in service, we will set up a rigorous process designed to eliminate defects or potential failure on the locomotive/coach. During the train acceptance process, it will be the responsibility of our Acceptance Engineer to inspect and test the unit for compliance to the design specification and for service operation. All observations, defects and deficiencies will be logged and given a unique identifier that will be sequential and tied to the vehicle number under acceptance. These will be passed directly to the local Rotem/MPI quality assurance representative for rectification and/or comment. Their effective rectification will be monitored and validated by our Acceptance Engineer.

CASE STUDY: SNCF New Fleet Introduction

Francilien is a Bombardier articulated train set designed for metro operations, with walk-through coaches, some of which are 369 feet and others 309.3 feet in length. The 172 train sets have distributed power, and offer robust acceleration and braking characteristics. Their doors are evenly positioned over their length and have a width of 6.3 feet. The 172 train sets are currently being introduced on Greater Paris suburban lines.

The SNCF Francilien Program Director organized the project into distinct packages including procurement management, train acceptance, and integrating all aspects of operations such as maintenance, infrastructure, driving services, customer service and security. Within the fleet introduction process, key risks were identified and the following mitigations were initiated:

- Delivery: To plan ahead for the risk of delays in delivery, rolling stock rosters were compiled so that during ramp-up Transilien could provide services either using a new Francilien train set or an existing train. Locomotive engineer rosters were established on the same basis.
- Fine-tuning and ensuring train set reliability: The strategy adopted by SNCF and Bombardier to secure fast reliability growth consisted of using on-board Bombardier technicians and SNCF test locomotive engineers on early service runs and conducting tests on the different configurations.
- Agreeing on the procedures to apply in the event of downgraded operations: This is a vital component. By working together with the manufacturer, the various possible downgraded operating modes for the train and the operational decisions to be taken in each case were identified. For example, in

CASE STUDY, continued: SNCF New Fleet Introduction

the event of a door failure, the decision on whether or not to keep the train in service should be covered by procedures set out in the traffic controller's reference documents. A working party was set up with Bombardier to agree these different procedures.

- Ensuring the highest possible standard of locomotive engineer training: In March 2009, specifications for train set locomotive engineer training were drawn up by the Traction Training division. The aim was to ensure that locomotive engineers were sufficiently knowledgeable and suitably trained to work the new trains to set safety and reliability standards. This included in downgraded and emergency situations. Training was provided on five Francilien driving simulators. Locomotive engineers were faced with a whole series of different scenarios, from the simplest to the most complex, all typical of situations occurring specifically in heavily congested operating environments.

Under the safety regulations, locomotive engineers are required to drive the train set within two months of training completion or to repeat the training process. The Locomotive Services Manager produced a training schedule consistent with the train set delivery schedule. In 15 months, 550 locomotive engineers were trained.

After training, line management is responsible for monitoring locomotive engineer progress. A booklet setting out ways of "creating failures" is provided so that managers can test the skills of their locomotive engineers in downgraded operating conditions. The locomotive engineer training results are shown in Figure 4-39. Continuous efforts are constantly being made to ensure that locomotive engineers maintain the high standards:

- Of the 550 locomotive engineers trained, 30 have been sent back for a refresher course following checks performed by their managers.
- A day is set aside with the repair teams at the maintenance depot so they can explain to the locomotive engineers how the different components work and should behave.
- Films showing best practices with regard to safety and presenting solutions to the problems encountered are shown to locomotive engineers during their statutory further training sessions.

Objectives	Results
To have enough locomotive engineers properly trained to drive trains	No trains were cancelled because of the absence of suitably trained locomotive engineers.
Locomotive engineers should not be the cause of delays.	No delays were the fault of locomotive engineers who were incapable of driving properly or of conducting trouble-shooting operation on the train.

Figure 4-39: Locomotive Engineer Training Objective and Results

Objectives Results

To have enough locomotive engineers properly trained to drive the trains. No trains were cancelled because of the absence of suitably trained locomotive engineers.

Locomotive engineers should not be the cause of delays. No delays were the fault of locomotive engineers who are incapable of driving properly or of conducting trouble-shooting operations on the train

On December 12, 2009, the day of the first unit introduction, the action plans for all the various packages had been completed. However, in January 2010, Bombardier began to fall behind on train deliveries. In addition,

CASE STUDY 4-7, continued: SNCF New Fleet Introduction

the trains that were delivered were beset by teething problems such that the reliability factor became an issue. To tackle these major issues, SNCF instigated the following actions,

Firstly, SNCF deployed its unique know-how to ensure that the late delivery of unreliable trains did not affect the performance of the line (Line H is the first line where Francilien were introduced). Mitigations scheduled as part of the risk analysis were successfully implemented, and the performance of the line did not fall below 90% throughout the entire introduction process as shown below.

Secondly, SNCF embraced an open and performance-focused partnership with Bombardier. Key actions were agreed:

- Bombardier reorganized its production line to make it more robust to allow it to catch up with late deliveries;
- Bombardier increased its after-sales service teams, sending a hundred engineers and technicians to the SNCF depot; and
- SNCF and Bombardier jointly developed a plan to boost train reliability.
- In December 2012, the actual delivery schedule finally caught up with the theoretical schedule, and 82 train sets were in service. Mean Distance Between Failures had sharply increased (see Figure 4-41).

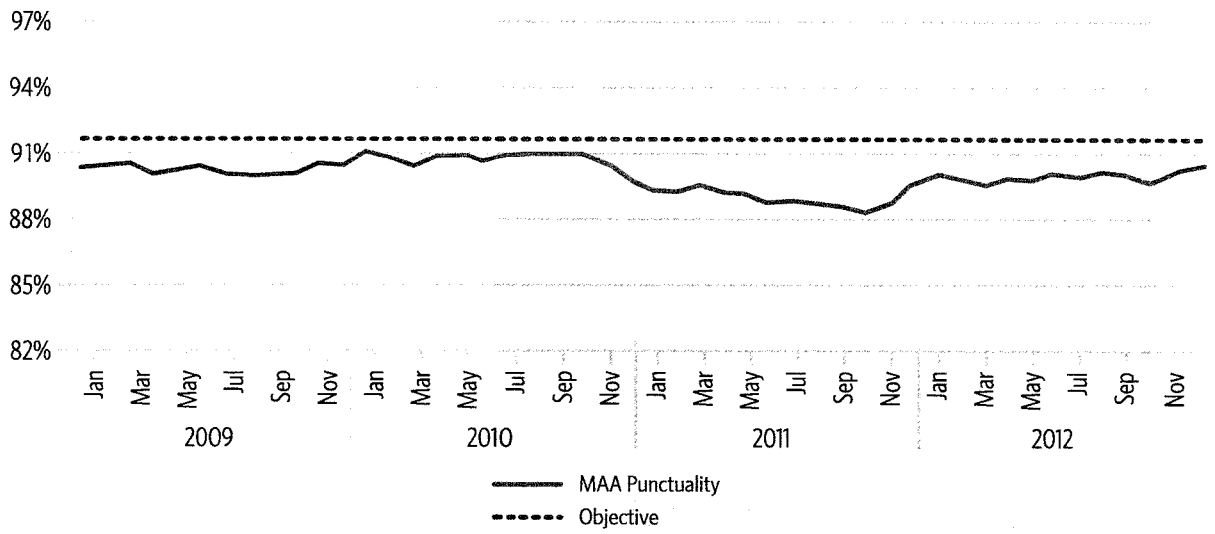


Figure 4-40: Sustained Good Performance on Line H

CASE STUDY 4-7, continued: SNCF New Fleet Introduction

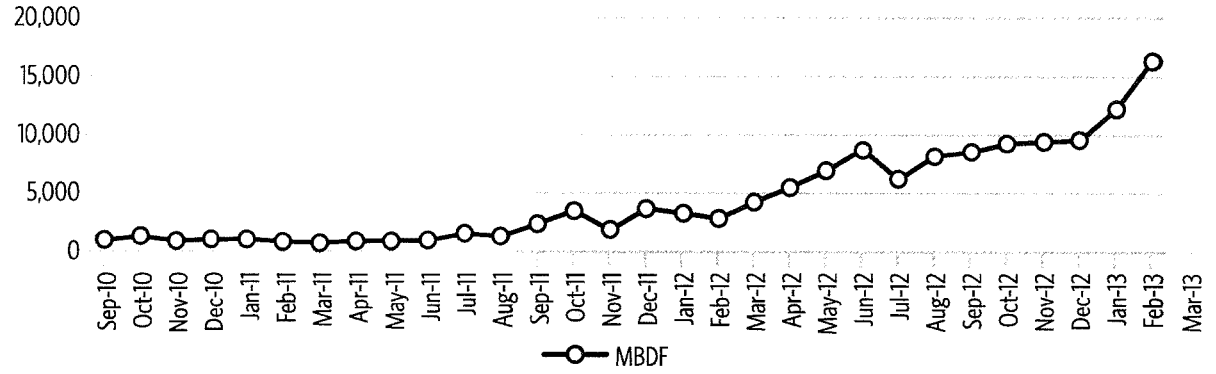


Figure 4-41: Strong Management of Train Failures

Lessons learned were:

- Have an independent audit to ensure that the manufacturer's production line is scaled to meet the contract schedule;
- Check that the manufacturer carries the requisite stocks of spare parts; and
- Carry out tests under real conditions.

This experience proved invaluable for the introduction of the same train sets on Line P, with excellent results.

Enforcement of third-party warranties: A major component of the maintenance function is the enforcement of warranties and the subsequent reimbursement to the MBTA for the costs of these repairs. The parameters for warranty work will be identified and defined for new cars and locomotives, as well as for third-party suppliers and vendors. The overall warranty period for MPI locomotives and Rotem coaches is 2 years; however, certain parts and systems such as elastomers or truck frames are covered for an extended periods of 5 years. The overhauled Kawasaki coaches are under warranty for 1 year. It is also fairly typical to "conditionally accept" new rolling stock, which has the effect of delaying the start of the true warranty period until the date of the actual acceptance. While the car builder's contract states that warranty work will be performed by the car builder, such contracts usually allow the owner's representative (operator) to perform warranty work such as the removal and replacement of defective parts and the related tests and inspections required when work is done on certain critical systems. All such warranty work would be done on force account, and all costs would be borne by the manufacturer. As part of the warranty agreement, the MBTA has negotiated a specific labor rate of $100.00 per hour for the warranty period. This rate includes direct labor, overheads, and general and administrative costs. The agreed-upon labor hours for each warranty repair are developed from the Maintenance Allocation Chart (MAC) that the car builder submits as part of its documentation package. The hours allowed to replace each part specified in the MAC are based on estimates initially developed by the car builder and agreed to by the MBTA.

The three contracts, Rotem coach delivery, locomotive delivery and Kawasaki mid-life overhaul, all lay out the protocols for determination of acceptance and in each case contain language that provides MBTA with additional relief if more than a specified number of units fail during the

life of the contract. If a certain hurdle rate is met or exceeded, the entire class is considered to have failed. Furthermore, there are mechanisms for liquidated damages if the Material Requirements of the contract are not met on a timely basis.

We have reviewed the terms of the current three major warranty projects cited above, and are comfortable that we can administer the contracts as presented. We further believe that our experience in dealing with similar warranty and acceptance work elsewhere will provide a benefit to MBTA and could provide a platform for value engineering, if MBTA were to determine it wanted such help.

In addition to new equipment and major overhaul warranty work, it is common that owners and operators enter into repair and return (R&R) contracts with specific vendors for the refurbishment of certain LRUs (equipment or modules), and these contracts carry specifically designated warranty periods. This contract rate will include direct labor, overheads, and general and administrative costs, as well as language addressing the replacement of a defective vendor-repaired unit within the warranty period. The designated warranty period for an R&R vendor may run from 30 days to two or more years. In the case of R&R, except in the case of a defective vendor repaired unit, we will bear the costs for the removal and replacement.

While the cause of repair and replacement may vary, the process in all warranty and R&R work is almost identical.

Each time a part is replaced, we will initiate a Field Service Report (FSR) that accompanies the work order entered into the MMS. The FSR indicates the exact nature of the part to be repaired or replaced, the defect and the estimated number of Mechanical Department labor hours to effect the removal and replacement of the part.

The FSR is the mechanism to ensure that the car builder, locomotive manufacturer or the R&R vendor has agreed to specific elements of warranty work (and operator expenses as needed) before an accounts receivable invoice is generated. While the overall contract specifies the general terms and conditions, the FSR becomes a tool that links each specific item to the overall contract

We further believe that, in concert with the FSR, an efficient warranty program can be built around the Warranty Defect Tag (WDT). The WDT mirrors the data that has been entered into the MMS and the FSR. All WDTs must be tracked, and rigorous management controls must be in place in to ensure a successful third-party warranty administration program. At its simplest a WDT system would include a repair tag (**RED** for warranty work, **BLUE** for R&R work). This physical tag would accompany the removed item and be recorded in both the MMS system and in all warranty management programs.

As example, we will assume that a defective locomotive traction motor (non-warranty issue) has been identified (traction motors are an R&R item that require periodic maintenance). Once the defective traction motor combo has been changed out, our mechanical forces will apply a **BLUE** Warranty Defect Tag (R&R Repair Tag) to the traction motor and call the chosen vendor, who would perform the refurbishment work and make arrangements to deliver the traction motor to the operator with its R&R Repair Tag attached. Data from the R&R Repair Tag is scanned into the warranty management sub-system Integrated Material Management (IMS) system, which sets up an internal flag indicating the warranty period.

Should this traction motor then experience a failure which would generate a warranty claim, a **RED** Warranty Defect Tag would be applied to the traction motor after it has been removed from the locomotive. The operator's mechanical staff would complete an FSR indicating the nature of the defect, the expected repair and the amount of operator maintenance labor that will be used to remove the traction motor and to install a replacement unit.

In either case, the FWR will be faxed or emailed to the vendor. The vendor, by signing the FSR, agrees to the costs of both the repair and (in the case of a warranty repair) the labor charges identified on the FSR. Upon receipt of a vendor-signed FSR

agreeing to the repair (and labor) costs, we will authorize the repair, and forward a copy of the FSR to Accounts Receivable as authorization to bill the vendor for appropriate costs. The Accounts Receivable function will enter the bill into a ledger for payment to the MBTA when the bill is paid.

Our material management tool will produce a monthly report, containing year-to-date data on:

- Field Service Reports issued;
- Outstanding Field Service Reports; and
- Third-Party warranty claims and amount of reimbursement.

It should be noted that this introduction to third-party warranty administration will be greatly amplified in ODRL 3.4 - 0.33, Warranty Control & Administration, which is due 90 days after Notice To Proceed (NTP).

4.A.7. Maintaining a Comprehensive and Up-to-Date Inventory Control System

4.A.8. Providing Information Management, Material Management, Performance Analysis and Reporting

We have combined these two sections because they are part of an integrated process.

Our assessment of the current situation: There are three Mechanical Department storerooms on the MBTA Service. Significant inventories are located in CRMF, Readville and SSSI. These facilities retain consumables, bulk materials and other items to support both on-going service and inspections, and repair functions. In addition, there are certain consumables (primarily, cleaning supplies and lubricating oils) and a regulated amount of bulk material (brake shoes, light bulbs, etc.) as well as LRUs maintained at each of the layover facilities. All materials (consumables, bulk materials and LRUs) are recorded and tracked in the IMS. The IMS is the IT tool used to manage the inventories, and to track items and usage. We understand that IMS is interfaced with the MMS, but have not specifically tested the level and nature of that interface.

Our Plan: This activity (see Figure 4-42) will be undertaken as part of the *Material Management and Purchasing* process, and is discussed in more detail within the Materials Management and Purchasing portion of our Proposal (see Section 8 Management Plan).

Process	**Material Management and Purchasing**
Type	**Support process**
Scope	**Manage spare part purchasing and all Mechanical Department inventories**
Leader	**Finance department/Superintendent Storehouse within the MD**
Key Performance Indicators	**Comprehensive KPIs will be set up in the leader dashboard, in particular:** • **100% spare parts availability** • **100% compliance between IT and real state of the inventory** • **Level of inventory**

Figure 4-42: Material Management and Purchasing Process

We are a strong believer in utilizing all possible tools to properly and efficiently track activities and material within the repair and servicing cycles. To that end, we will reinforce the core responsibility of each Mechanical Department supervisor to identify both the materials and the resources required to accomplish each task. Additionally, there is a need to fully and regularly account for capital spares, warranty parts and resources, and all "remove, repair and replace items", whether the repair component is done in house or by designated vendors. There are a significant number of components, assembled units and LRUs that are sent out to vendors for refurbishment and then returned as fit material. These items will be tracked throughout the entire cycle from removal through transport, refurbishment, return, stock and ultimately placement on another piece of equipment.

Since the Material Management and Purchasing Department is within the Finance Department, we will institute a contract between the Finance Department and Mechanical Department to set out the expected compliance levels. Such a

contractual relationship provides a mechanism for the CMO to be more fully in control of his activities. This contractual relationship links Mechanical with Purchasing in the obligation to provide the parts on a timely basis and places the responsibility for failure on both parties collectively. This process is designed to avoid the "blame game".

Moreover, we propose to undertake two additional Mechanical Department initiatives:

- We will reduce the number of parts be managed in inventory by instituting a heavy reliance on kitting methodology.
- We propose to reduce the MBTA Support Inventory by 20% by 2019, through an aggressive partnering relationship with vendor and suppliers, wherein expedited delivery will compensate for reduced stocking levels.

A more detailed discussion of the entire purchasing and materials management operation is found in Section 8 Management Plan.

As indicated in Section 4.A.2 above, we are committed to the development of ELIST, MAC, and Life Cycle Maintenance Plan as the basis for ourapproach to organizing rolling stock maintenance. The ELIST will inform our approach toMaterial Management and Purchasing and the MAC & Life Cycle MaintenancePlan will inform our approach to Maintenance Management Systems. Please see our overall approach in theSection 8 Management Plan and Section 9 Information Technology Plan for areview of how we will develop this process. In addition, We will comply with the ODRL requirements for MaintenanceManagement Systems and Material Management and Procurement Systems

As part of our commitment to Moving FurtherTogether in all transparency, we will give the MBTA access to all data withthe ability to generate reports. Data access will be allowed through the ITP toall systems, cloud based and those located in the Commuter Rail IT Environment.Either/both standardized, pre-formatted reports and customized reports, as the system allows, may be requested or run directly by the MBTA. The MBTA willdesignate individuals who will be authorized to enter the system and systemauthorization settings will be configured to allow actions appropriate to eachindividual. This will ensure full transparency as the MBTA will haveaccess to the data not only at their request, but at their own discretion.

4.A.8.i. Providing Performance Analysis and Reporting

Our assessment of the current situation: Figures show that MBTA commuter fleet performance is regularly and significantly below plan. Further, the trend line for that performance has been declining over the past 10 years as previously shown. Benchmarks show that the MBTA fleet is also performing much poorer than comparable fleets in the U.S. Moreover, low fleet performance and repetitive/basic failures indicate that fleet performance analysis and return- on-experience processes are not in place.

Locomotive performance (failures): We have analyzed the locomotive performance over the past 4 years. The Jan-Nov 2012 failure analysis is presented in Figures 4-43 through 4-46 (minutes shown are primary delay minutes).

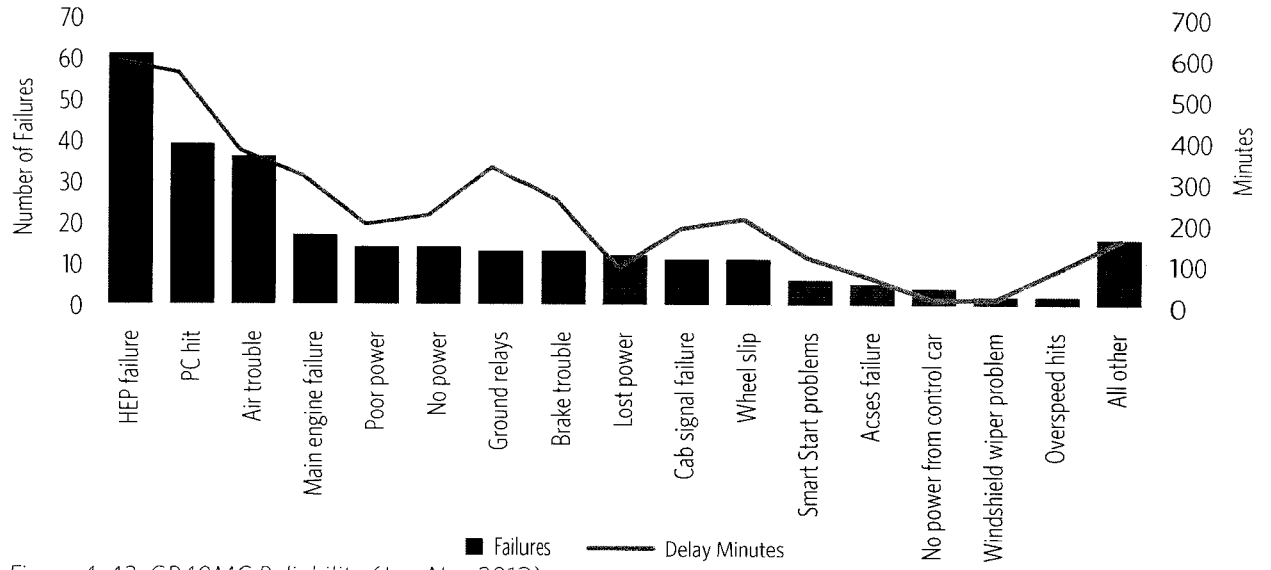


Figure 4-43: GP40MC Reliability (Jan-Nov 2012)

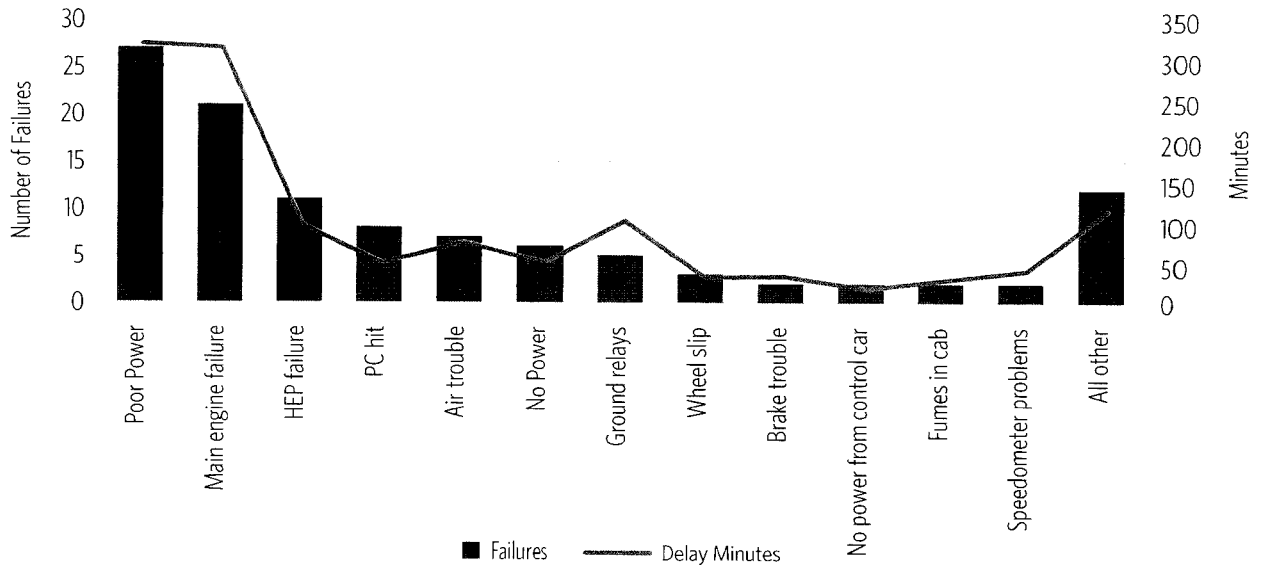


Figure 4-44: F40PH2 reliability (Jan-Nov 20120)

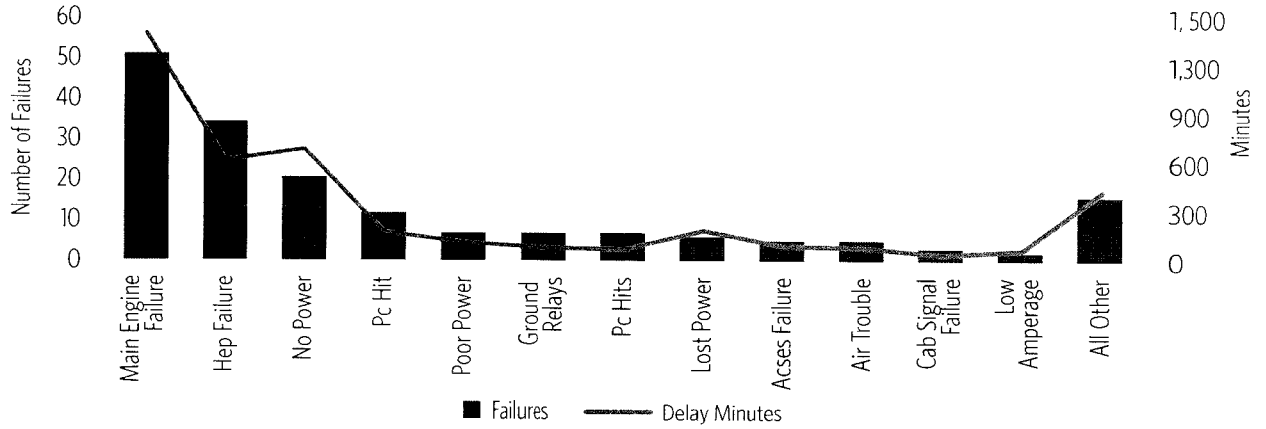


Figure 4-45: FP40PH2C Reliability (Jan - Nov 2012)

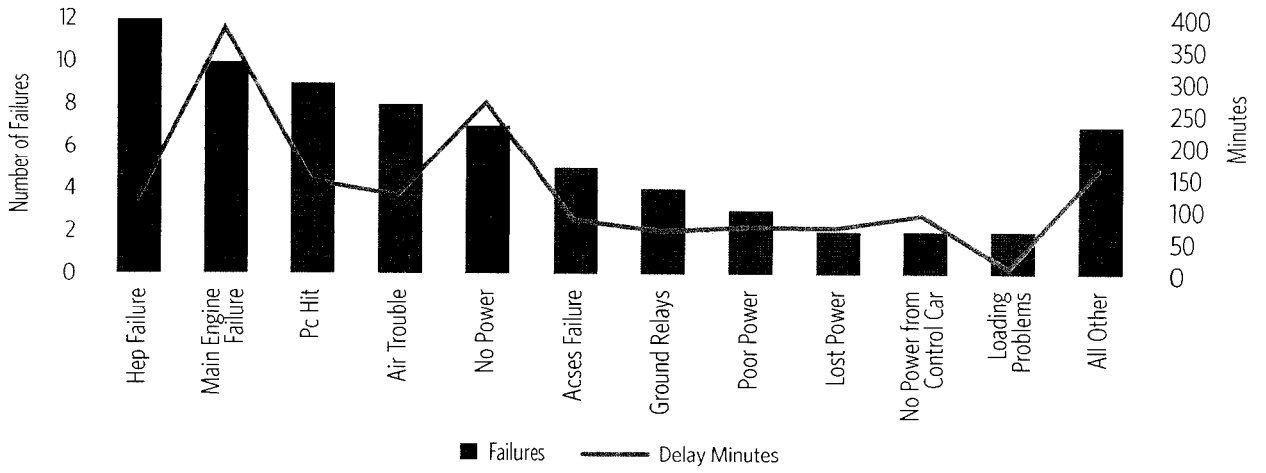


Figure 4-46: FP40PHM2C reliability (Jan - Nov 2012)

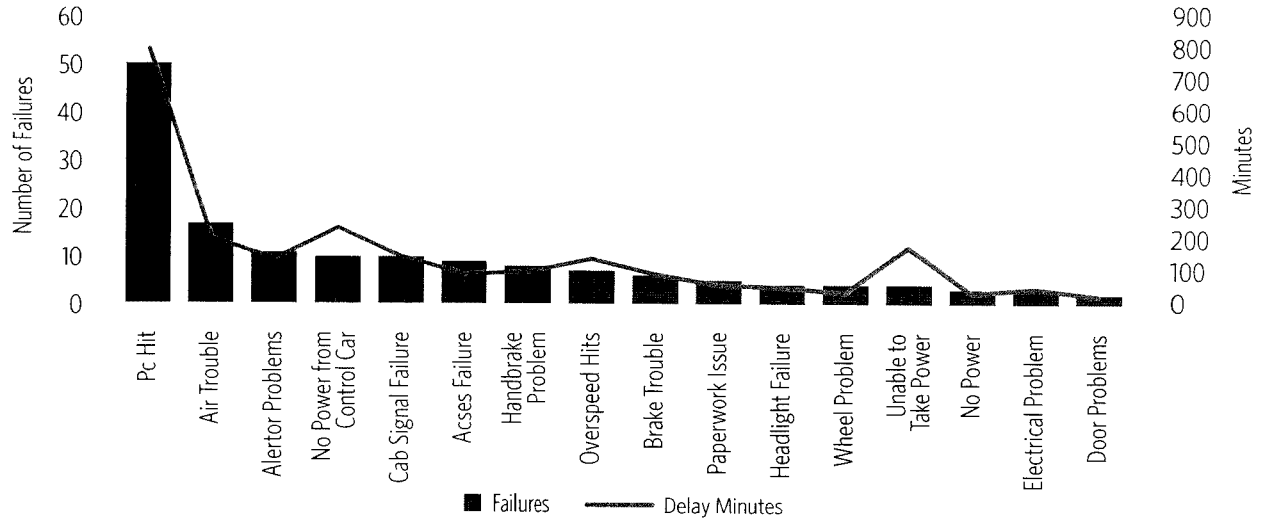


Figure 4-47: CTC reliability (Jan - Nov 2012)

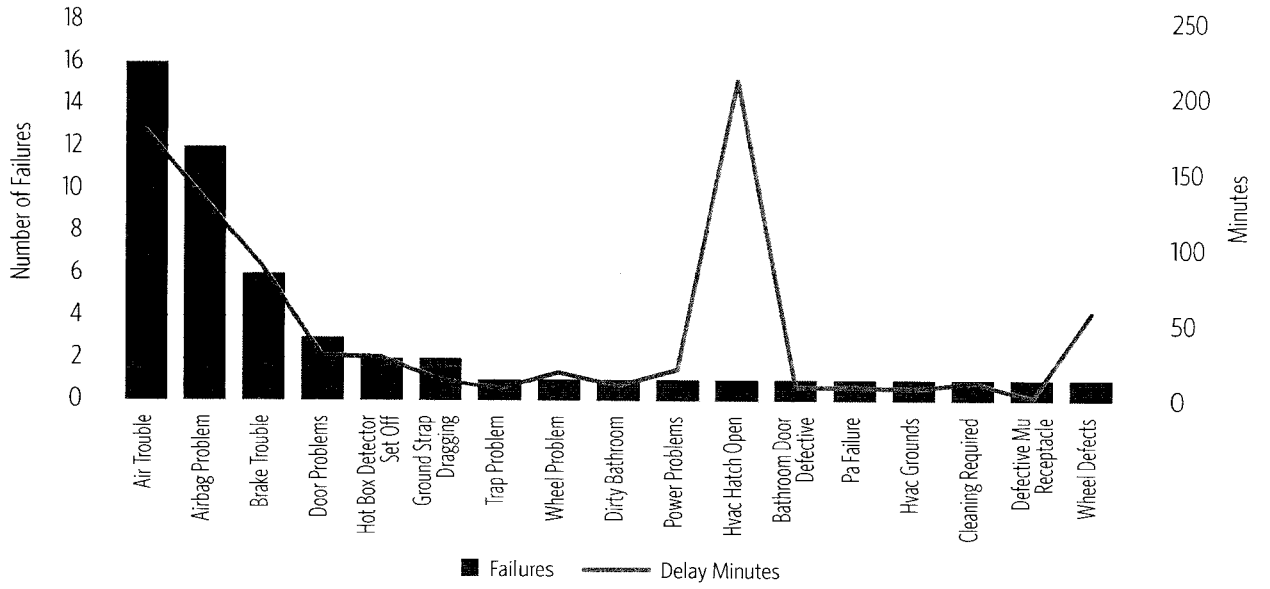


Figure 4-48: BTC Reliability (Jan - Nov 2012)

HEP, main engines and PC hits are the main causes of delays. Solving these failures will be our first priority.

Cab Trailer Coach Performance (Failures)

We have analyzed the cab coach performance over the past 4 years. The Jan-Nov 2012 failure analysis is presented in Figure 4-47 on the previous page.

PC hits are the main cause of delays. We will focus on these aspects to achieve reliability targets.

Blind Trailer Coach Performance (Failures)

We have analyzed the blind coach performance over the past 4 years. The Jan-Nov 2012 failure analysis is presented in Figure 4-48 on the previous page.

The number of BTC failures leading to train delays is minor in comparison with the locomotive and CTC impact. Blind trailer coach performance is mainly driven by the passenger comfort performance.

Coach *Comfort* Performance (Service Failures)

Current Mean Time Between Service Failures results are far below the objective for both CTC and BTC coaches. (Per the RFP, service failures are defined as in-service failures of vehicles or systems that do not affect the On-Time-Performance of the train or MDBF calculations, but affect the passengers, such as HVAC, toilet system, or communication system failures.) During the proposal preparation process, we have carried out a number of audits in the trains and have identified the following areas of weakness: seating, cleanliness, passenger announcement, doors and HVAC. Lighting looked to be in good condition.

Alongside this performance analysis, we believe that the Pre-Proposal Property Condition Assessment gave us a fair understanding of the state of the fleet.

Our Plan: We will set up a Mechanical Department Engineering Team under the direction of the Superintendent of Engineering and Lean Management to analyze fleet defects in terms of both safety and reliability and to make sure the return-on-experience process delivers sustainable improvements. This team will be driven by the Engineering & Lean Management process. We will focus on Engineering in this section (see Figure 4-49).

Process	**Engineering and Lean Management**
Type	**Support process**
Scope	**Monitor the fleet performance on a daily basis and take appropriate actions to improve the performance of the fleet**
Leader	**Superintendent Engineering and Lean Management**
Key Performance Indicators (KPIs)	**Comprehensive KPIs will be set up in the leader dashboard**

Figure 4-49: Engineering and Method Process

The Mechanical Department Engineering Team, consisting of three experts, will be set up to analyze the fleet performance on a daily basis and undertake technical improvements to correct the most intricate failures. The Engineering Team will be the keystone of our technical improvement plan, and will be fully staffed and functional within 90 days of NTP (see Figure 4-50).

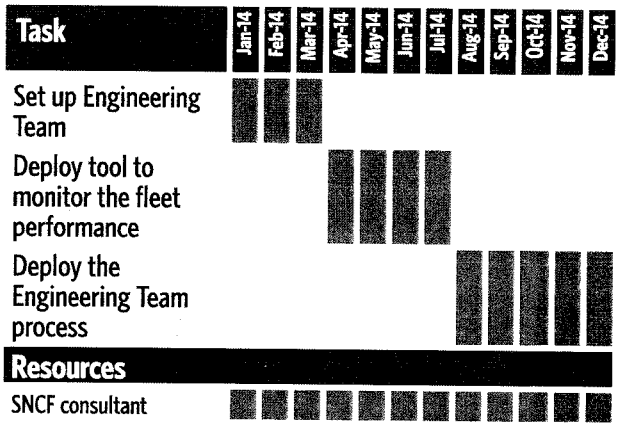


Figure 4-50: Engineering Team Fleet Performance Timeframe

The Superintendent of Engineering and Lean Management will attend the weekly Joint Performance Improvement Program led by Transportation. The purpose of this group is explained in detail in the Section 6 Transportation Services Plan. It will gather Transportation, Engineering and Mechanical Departments performance staff to tackle performance issues in an integrated manner. For instance, our preliminary analysis shows that there are persistent punctuality issues on the trains leaving Rockport layover. Even if the data made available to us do not let us know what the reasons for these delays are, we expect that both the Transportation (for example, late locomotive engineers) and the Mechanical Departments (Rockport layover condition is recognized as poor) will have to take actions to solve the problem. This issue will be commonly tackled as part of the first Joint Performance Improvement group session during the first week of operations.

- All failures reported by Transportation or the Mechanical Department will be monitored and analyzed. Any problem on the fleet will be identified quickly and experts will be able to develop a solution accordingly, such as making sure the maintenance rule is properly applied, modifying the maintenance rule or changing a failing part on the whole fleet. They will interface with the maintenance managers to help them achieve the objectives of their process.

Every week, the Superintendent of Engineering and Lean Management will hold a meeting with managers and supervisors to get information, provide recommendations and develop action plans with regards to the maintenance plan and component failures. Every month, they will organize a meeting to review the performance of the fleet and monitor the progress of actions against the plan. they will ensure that actions deliver the expected results and if not, they will work with the experts and the managers to modify these. Every 6 months, each manager, assisted by the Superintendent of Engineering and Lean Management will have a dedicated session with the CMO to present their performance results.

The first step of this work has been carried out during the proposal preparation. We have developed a reliability program to be implemented from day one of operations. Building on the performance analysis and Pre-Proposal Property Condition Assessment outputs, these actions will be either added in the on-going maintenance plan or undertaken immediately after the notice to Commencement Date as shown below (see Figures 4-51 and 4-52).

Locomotive Reliability Improvement Plan

Failing Function	Reason for Action	Class	Action	When
HEP	MDBF analysis	GP40, F40PH-2C, F40PHM-2C, MP36	Replace fuel filters	Every 92-day operation
HEP	MDBF analysis	GP40, F40PH-2, F40PH-2C, F40PHM-2C, MP36	Inspect 480V Cables for proper length and damage replace as required	Every 92-day operation
HEP	MDBF analysis and Pre-Proposal Property Condition Assessment	GP40, F40PH-2C, F40PHM-2C, MP36	Inspect for water, oil and fuel leaks	Every 92-day operation
HEP	MDBF analysis and Pre-Proposal Property Condition Assessment	GP40, F40PH-2C, F40PHM-2C, MP36	Repair water, oil and fuel leaks	Every 92-day operation

Locomotive Reliability Improvement Plan				
Failing Function	**Reason for Action**	**Class**	**Action**	**When**
HEP	MDBF analysis	GP40, F40PH-2C, F40PHM-2C, MP36	Replace turbo charger	Every 368-day operation
HEP	MDBF analysis	GP40, F40PH-2C, F40PHM-2C, MP36	Load box HEP unit	After the notice to commence service date
HEP	MDBF analysis	GP40, F40PH-2C, F40PHM-2C, MP36	Check fuel system pressure while on load box	After the notice to commence service date
HEP	MDBF analysis	GP40, F40PH-2C, F40PHM-2C, MP36	Adjust frequency and voltage	After the notice to commence service date
HEP	MDBF analysis	GP40, F40PH-2C, F40PHM-2C, MP36	Check cooling fan operation	After the notice to commence service date
HEP	MDBF analysis	GP40, F40PH-2C, F40PHM-2C, MP36	Replace cooling fans/ temperature sensors	After the notice to commence service date
Main Engine	Pre-Proposal Property Condition Assessment	GP40, F40PH-2, F40PH-2C, F40PHM-2C, MP36	Repair water, oil and fuel leaks	After the notice to commence service date
Main Engine	Pre-Proposal Property Condition Assessment	GP40, F40PH-2, F40PH-2C, F40PHM-2C, MP36	Load box main engine	After the notice to commence service date
Main Engine	Pre-Proposal Property Condition Assessment	GP40, F40PH-2, F40PH-2C, F40PHM-2C, MP36	Compression test main engine	After the notice to commence service date
Main Engine	Pre-Proposal Property Condition Assessment	GP40, F40PH-2, F40PH-2C, F40PHM-2C, MP36	Replace defective power assemblies and cylinder heads	After the notice to commence service date
Main Engine Room	Pre-Proposal Property Condition Assessment	GP40, F40PH-2, F40PH-2C, F40PHM-2C, MP36	Steam clean engine/HEP room and sumps	After the notice to commence service date
Main Engine Room	Pre-Proposal Property Condition Assessment	GP40, F40PH-2, F40PH-2C, F40PHM-2C, MP36	Clean main engine /HEP radiators	After the notice to commence service date
Truck and Under body	Pre-Proposal Property Condition Assessment	GP40, F40PH-2, F40PH-2C, F40PHM-2C, MP36	Steam/pressure wash truck and under body	After the notice to commence service date
Truck and Under body	Pre-Proposal Property Condition Assessment	GP40, F40PH-2, F40PH-2C, F40PHM-2C, MP36	Steam/pressure wash truck and under body	Every 1472-day
Locomotive Cab	Pre-Proposal Property Condition Assessment	GP40, F40PH-2, F40PH-2C, F40PHM-2C, MP36	Replace defective ceiling panels, seats and sun visors	After the notice to commence service date
PC Hits	MDBF analysis	GP40, F40PH-2, F40PH-2C, F40PHM-2C, MP36, CTC-1B, CTC-3, CTC-4	Download and analyze event recorder and ACSES to determine failure cause	Every Incident

Figure 4-51: Locomotive Reliability Improvement Plan

Note that the last action (PC Hits) applies on CTC as well.

CTC/BTC Reliability Improvement Plan				
Failing Function	**Reason for Action**	**Class**	**Action**	**When**
No Power from control car	MDBF analysis	CTC-1B, CTC-3, CTC-4	Replace controller	Every 736-day operation
Cab Signal Failure/Wheel slide failure	MDBF analysis and Pre-Proposal Preparation Inspection	CTC-1B, CTC-3, CTC-4,BTC-1B,BTC-1A,BTC-3,BTC-1C,BTC-4D,BTC-4,BTC-4A,BTC-4C	Inspect speed sensor cables/connection	After the notice to commence service date
Cab Signal Failure/Wheel slide failure	MDBF analysis and Pre-Proposal Property Condition Assessment	CTC-1B, CTC-3, CTC-4,BTC-1B,BTC-1A,BTC-3,BTC-1C,BTC-4D,BTC-4,BTC-4A,BTC-4C	Replace or reroute wiring speed sensor/ cable connection	After the notice to commence service date
Corrosion at Corner Posts	Pre-Proposal Property Condition Assessment	CTC-1B, CTC-3, CTC-4,BTC-1B,BTC-1A,BTC-3,BTC-1C	Determine extent and depth of corrosion, its source and remediation	After the notice to commence service date
Air Conditioning	Pre-Proposal Property Condition Assessment	CTC-1B, CTC-3, CTC-4,BTC-1B,BTC-1A,BTC-3,BTC-1C	Clean all evaporators	After the notice to commence service date
Air Conditioning	Pre-Proposal Property Condition Assessment	CTC-1B, CTC-3, CTC-4,BTC-1B,BTC-1A,BTC-3,BTC-1C	Repair leaking piping in overhead	After the notice to commence service date
Doors	Pre-Proposal Property Condition Assessment	CTC-1B, CTC-3, CTC-4,BTC-1B,BTC-1A,BTC-3,BTC-1C	Inspect and clean side body upper door tracks	After the notice to commence service date
Doors	Pre-Proposal Property Condition Assessment	CTC-1B, CTC-3, CTC-4,BTC-1B,BTC-1A,BTC-3,BTC-1C	Repair side body door latches	After the notice to commence service date
Trap Door Heaters	Pre-Proposal Property Condition Assessment	CTC-1B, CTC-3,BTC-1B,BTC-1A,BTC-3,BTC-1C	Repair trap door heaters	After the notice to commence service date
Toilet Room	Pre-Proposal Property Condition Assessment	CTC-1B, CTC-3,BTC-1B,BTC-1A,BTC-3,BTC-1C	Clean all toilet rooms	After the notice to commence service date
Seating	Pre-Proposal Property Condition Assessment	CTC-1B, CTC-3,BTC-1B,BTC-1A,BTC-3	Replace defective and damaged seat bottoms and crash pads	After the notice to commence service date
PA	MTBSF analysis and Pre-Proposal Property Condition Assessment	CTC-1B, CTC-3, CTC-4,BTC-1B,BTC-1A,BTC-3,BTC-1C,BTC-4D,BTC-4,BTC-4A,BTC-4C	Test PA system	After the notice to commence service date
PA	MTBSF analysis and Pre-Proposal Property Condition Assessment	CTC-1B, CTC-3, CTC-4,BTC-1B,BTC-1A,BTC-3,BTC-1C,BTC-4D,BTC-4,BTC-4A,BTC-4C	Repair PA system	After the notice to commence service date

Figure 4-52: Coach Reliability Improvement Plan

We would like to draw the MBTA's attention to the fact that coach heavy cleaning and the seat replacement program undertaken immediately after the notice to commence service date will show a step change for the customer, who will have the feeling of being transported in a brand new fleet. Moreover, some on-board passenger announcement (PA) systems are not in a state of good repair. We will test and repair these systems on the fleet for the benefit of our passengers (see Section 7 Customer Service).

In addition to the above improvements, we intend to increase the carman workforce to handle on-going programs designed to improve the overall interior conditions of the coaches.

After data gathering and initial analysis, the Mechanical Department Engineering Team will be in a position to propose value-for-money actions in order to continuously improve the fleet performance, and to advise the CMO and the MBTA on the strategic choices to renew or upgrade the fleet. Each year, the Superintendent of Engineering and Lean Management will produce a full report on the state of the fleet and will provide recommendations to prioritize upgrades or replacements.

We will continue operating a Mechanical Desk available 7 days a week, 2 shifts a day, so that mechanical assistance can be made available when a failure occurs on a train.

The fleet performance will improve as shown in Figures 53 and 54.

These performance improvements will lead to a 10% reduction of delay minutes related to equipment failures by December 2015 and to a 30% reduction of the same delay minutes by 2019, reducing the delay minutes related to equipment failures from 36,368 in 2012 to 23,639 in 2019 (see Section 6 Transportation Services Plan).

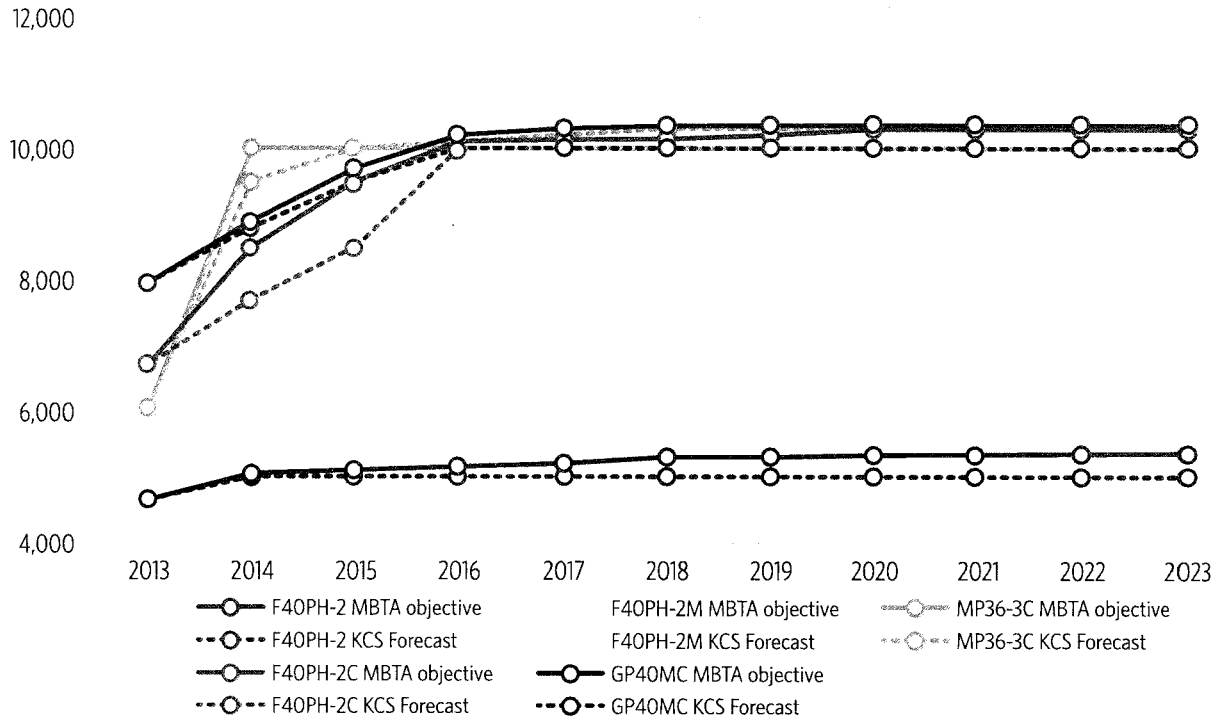


Figure 4-53: Locomotives MBDF Forecasts

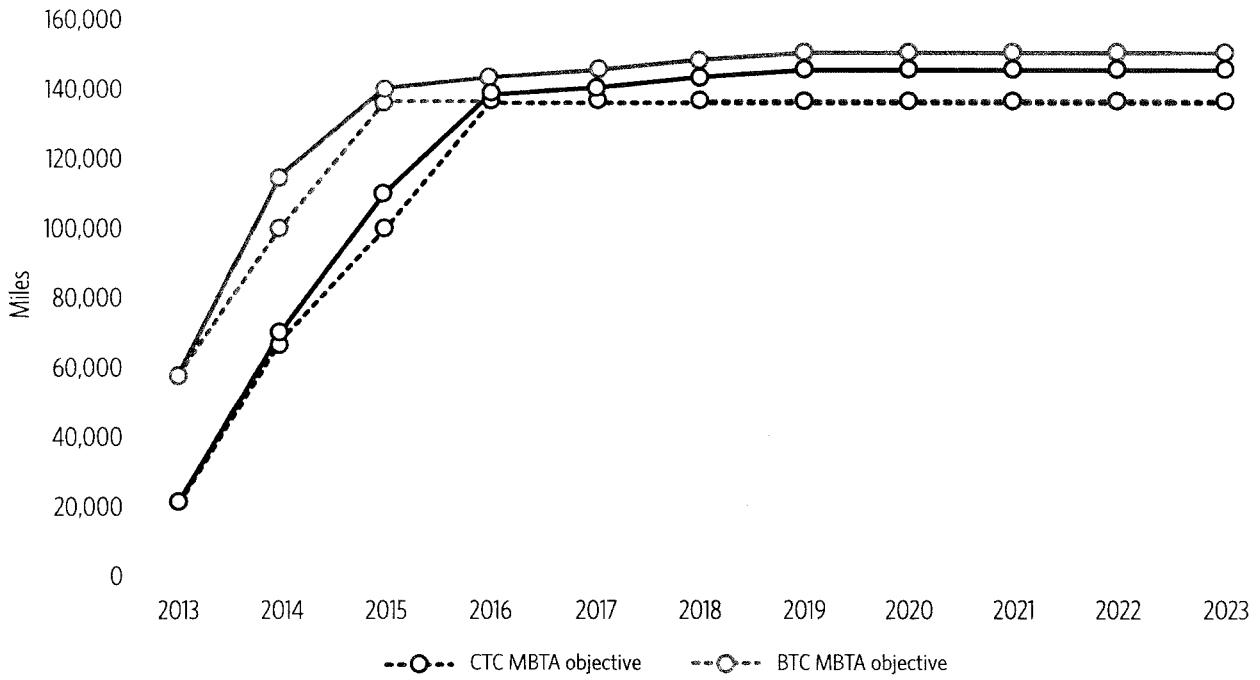


Figure 4-54: Coaches MBDF Forecasts

CASE STUDY: SNCF "AGC" Diesel Multiple Unit Reliability Growth

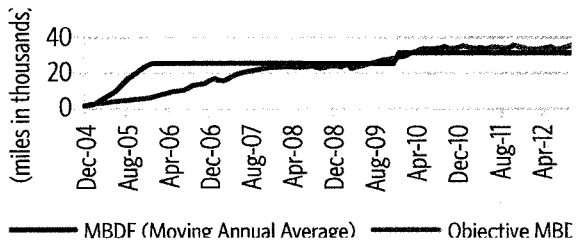


Figure 4-55: SNCF AGC Performance Growth Since Service Introduction in 2004

Between 2004 and 2011, SNCF introduced 700 Diesel Multiple Units for its regional operations. Thanks to a very efficient engineering process, fleet reliability improved consistently and achieved world-class performance, operating above 30,000 miles between failures. (See Figures 4-55 and 4-56.)

Figure 4-56: SNCF AGC DMU Train Set

4.A.9. Integrating New Technologies and Work Practices as Introduced by the Operator or the MBTA

Our assessment of the current situation: New locomotives and coaches will be introduced in the coming years, bringing new technologies within the fleet. Moreover, relying on current conditions presented earlier, we believe opportunities exist for work practices improvements.

Our Plan: As part of the new fleet introduction program, we will train our staff on the new fleet technologies, as described previously in this Plan.

To promote employee involvement across the Mechanical Department, we will launch an annual innovation drive. Each mechanical team member will be asked to propose at least one innovation per year in the areas of safety, work place improvement and cost-efficient new techniques or management practices. The ideas and initiatives will be reviewed and their feasibility assessed by their line managers. All innovations which are considered feasible and relevant will be implemented within one month. The Lean Management team will step in to ease the implementation when required. The employees who came up with these ideas and innovations will be entered into a drawing for an annual reward, such as a flat screen TV. This recognition and the prompt implementation of the innovative ideas will encourage employees to participate and ensure that the Mechanical Department benefits as soon as possible from the proposed innovations and improvement ideas.

Keolis implemented a similar, very successful initiative at KRSV, which operates the VRE as shown in Figure 4-57. Every operational and maintenance employee created their own safety program and was entered into a contest for the best program. The employee with the best and most comprehensive personal safety program won a flat screen TV and was featured in the internal Keolis newsletter.

As part of our commitment to deliver the best innovations to the MBTA, we have investigated solutions to reduce the MBTA environmental impact by increasing the railroad fuel efficiency.

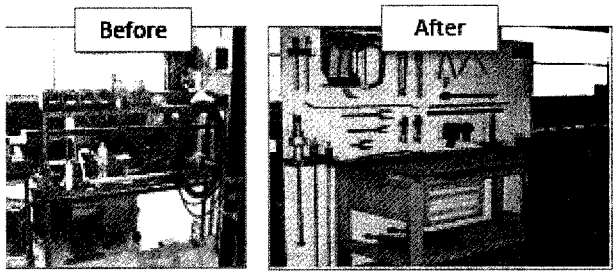


Figure 4-57: Workplace Improvement Made Possible through Involvement Innovation in Keolis Shop

The introduction of a Driver Advisory System in the locomotives and cab cars would improve energy performance. The Driver Advisory System is a system which provides the locomotive engineer with easy-to-follow advice on driving techniques. This system will dynamically assess performance against the timetable and provide the locomotive engineers with additional information to allow them to optimize their driving techniques. Information displayed will include optimum speed, when to commence coasting and breaking, forward-look optimum speed profile, performance against the timetable and expected arrival times. The system also records and transmits key data to a base station on energy performance, which will allow trends to be identified and improvements implemented (see Figure 4-58 on next page).

Relying on manufacturer data, the implementation of this system will reduce fuel consumption by at least 10%, which is about $3M annual savings for the MBTA, for a one-off cost of implementation of about $4M. This estimate is supported by a theoretical analysis undertaken by Knorr Bremse. By end of 2015, we will carry out a trial in real conditions to assess the final business case, which we expect to be highly profitable, and submit the investment opportunity to the MBTA.

4.A.10. Implementing, Operating and Maintaining FRA Approved Diesel Multiple-Unit (DMU) Cars

Our assessment of the current situation: The MBTA may introduce DMUs in the coming years.

Our Plan: We will deploy the same few fleet introduction process as detailed previously in this Plan to introduce new DMUs. With our considerable worldwide experience in operating both locomotive and coach train sets and DMUs, we understand accurately the scope and the scale of the DMU introduction impact on MBTA operations. In particular, we will review and develop a plan to accommodate DMUs. We will include plans to upgrade the CRMF and SSSI tracks provided that the coach and locomotive shop will not be adapted to DMU maintenance. We will set a training plan for locomotive engineers, conductors, and mechanics. Our HR Department will review all collective bargaining agreements to ensure a smooth introduction. We will roster DMUs in concert with operations to incorporate smooth fueling in operations.

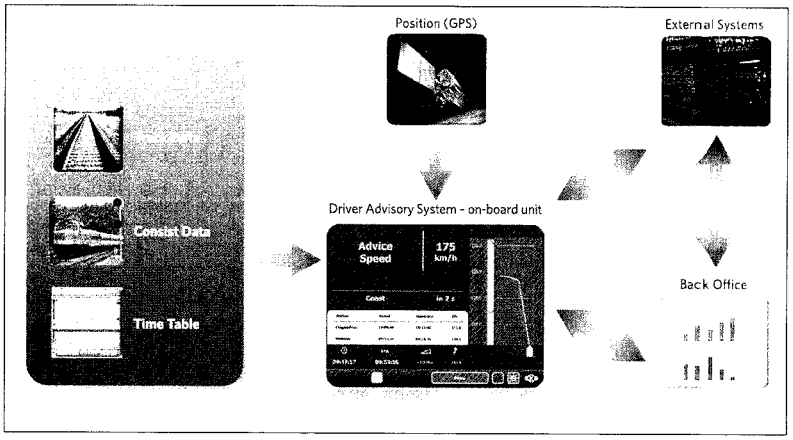


Figure 4-58: Driver Advisory System Architecture

At this stage, we have already identified the following expected impacts:

- By employing a single/multiple unit concept, we could run shorter trains in midday periods, allowing us to cut trains in terminals after peak hour runs and having the house engineer move them to the maintenance facilities.
- As every vehicle is self-propelled, it could be moved by a house engineer only, so that yard switchers would no longer be required.
- Our Mechanical Department will convert carmen into machinists and electricians, since the FRA defines a DMU as a locomotive, and so it has to be maintained as one.
- Maintenance facilities will be reviewed to be adapted to DMU maintenance (locomotive and coach shops would not be adapted).
- We anticipate the impact on crew members would be low, and CBA's renegotiation would not be a major issue.
- Depending on the design of the DMUs, we may have to fuel each individual vehicle on the train, instead of the locomotive only. If this was to be the case, we would qualify mechanics as yard engineers to move the trains while being fueled.
- We will train our locomotive engineers, conductors and mechanics as for any new equipment introduction.

We will provide the MBTA with DMU maintenance costs per unit that will be added to the FFP, while the unit costs of the vehicles being retired will be deducted.

4.A.11. Operating the Re-Railing Crane

Our assessment of the current situation: MBTA operates re-railing cranes and support equipment.

Our Plan: We will provide re-railing services using the MBTA's Kershaw and Mantis cranes and support equipment to clear derailed MBTA railroad equipment and other obstructions from the MBTA railroad rights of way and other railroad lines directly used for the MBTA Service.

We will rely on the nine existing licensed operators to operate the crane. The hoist engineer licenses will be renewed every 2 years

(as required by MA DPS), and they will have medical exams to maintain their DOT medical cards. As crane operators retire, move to other positions or no longer perform wrecking duties, we will draw from the pool of carmen to fill the ranks and maintain sufficient crane operators to meet the needs of the service.

The Mechanical staff will carry out minor wreck crane maintenance, while certified contractors will provide larger repairs. The wreck cranes will be inspected annually by a licensed service provider, which will deliver a certificate of unit testing to KCS. This inspection of the wreck crane will be as relates to the crane itself and the outriggers (and hi-rail equipment), and is not to be confused with the motor vehicle inspection mandated by the MA DMV.

4.A.12. All Reporting Required by US DOT, FRA, EPA, MDTE, APTA, FTA as well as Other Applicable Laws, Rules and Regulations

We will perform all work and provide all services, in particular, maintaining the fleet and performing all inspections and tests, in compliance with the applicable requirements of the Code of Federal Regulations (CFR), Title 49, Transportation Parts 200 to 299 in its current form and as periodically amended and updated during the Term. In performing these inspections, we will make sure that the work associated with these inspections and tests is appropriately supervised.

As part of the ISO 9001 process, the QHSE Manager will be in charge of developing and keeping up-to-date the FRA Compliance Management Plan.

We take environmental issues very seriously. We will monitor the proper use of waste separation. As part of the audit program as previously detailed in this Plan, managers and auditors will check that waste separation is undertaken in compliance with ISO 14001 standards. Any non-compliance will be tracked and solved through the post-audit action plan. Moreover, we will endeavor to reduce water consumption. We will monitor the state of good repair of pipes to fix the leaks and set up efficient cleaning procedures, whether through machine washing or hand cleaning. These procedures will be set up as described previously in this Plan. We expect a 5% to 10% water consumption reduction during the contract. Lastly, we will monitor that locomotives are shut down when stabled in the layovers in compliance with the relevant regulations.

4.B. FLEET COMPOSITION MANAGEMENT

4.B.1. Maintenance Plans for Each Fleet

Maintenance Plan Overview: We will perform maintenance on all rolling stock using the following parameters:

- All maintenance operations will provide the highest level of safety for both the customer and workforce.
- All maintenance plans and specific procedures will be established in a manner to provide world-class performance and customer satisfaction.
- All maintenance plans will initially rely on the data contained within the 2011-1015 Fleet Management Plan.
- All maintenance plans will utilize RCM (Reliability Centered Maintenance). It should be noted that existing fleets will require a stair-step approach to reach full compliance. Portions of the fleet that are scheduled to be retired within 5 years will receive an abbreviated version of RCM.
- All maintenance plans will be fully compliant with all elements of the current 49 CFR 221, 229, 231, 236, 238and 239 as well as all relevant APTA and AAR standards.

Please note that the plans presented below are preliminary maintenance plans only. The fully developed versions of the plan will be developed and submitted through ODRL as specified by the MBTA.

Equipment | i) BTC-1C Pullman Standard 200-series

Assumptions:

- Retirement date FY 2020 and Equipment Significant Events/Overhaul dates for activities prior to conveyance are as indicated in: 2011-2015 Commuter Rail Fleet Management Plan.
- Truck Overhaul performed FY 2009 (at time of CRASP)
- Side Body Window Replacement completed FY 2010 (2011-2015 Fleet Management Plan}

Inspection/Maintenance Intervals

Each Inspection and Maintenance performed at designated interval will be fully compliant with all Code of Federal Regulations (CFR) as well as all current MBTA requirements and APTA Standards and Recommended Practices for Passenger Equipment.

Each Inspection and Maintenance activity will build on and include all elements of the preceding Inspection and Maintenance. As an example; the 368 Day Inspection/Maintenance will include those items specific to the 368 Day interval in addition to all items required for the Class I Brake Test, Daily Interior/Exterior, 30 Day Filter change and 184 Day Inspection/Maintenance.

Periodic Inspections and Maintenance

- Class I Brake Test
- Interior/Exterior Calendar Day Inspection
- 30 Day HVAC Filter Renewal
- 184 Day Inspection/Maintenance
- 368 Day Inspection/Maintenance
- 1476 Day Inspection/Maintenance
- 8 Year (second 1476 Day)

Reliability Centered Maintenance Additions

- 368-Day Inspection/Maintenance
  - ✓ Clean all HVAC Evaporator and Condenser Coils
  - ✓ Clean, lubricate and adjust all vestibule door tracks and operating dampers
  - ✓ Test and repair all protective heat (trap door heaters)
- 1472-Day Inspection/Maintenance
- Truck Overhaul
  1. All wheels replaced
  2. All Shock Absorbers and Yaw Dampeners replaced
  3. Springs and Bolster Qualified
  4. TBU Hoses replaced
  5. Spring Seats Inspected
  6. Pedestal Liners Inspected and replaced as required

Initiatives

- Design and Application and testing of Low Level Path Marking (LLPM) per APTA Safety Standard
- Testing of Emergency lighting per APTA Standard
- Replacement/Application of Emergency Signage per APTA Safety Standard

Equipment ii) BTC-3 MBB 500-series

Assumptions:

Retirement date FY 2014

Inspection/Maintenance Intervals

Each Inspection and Maintenance performed at designated interval will be fully compliant with all Code of Federal Regulations (CFR) as well as all current MBTA requirements and APTA Standards and Recommended Practices for Passenger Equipment.

Each Inspection and Maintenance activity will build on and include all elements of the preceding Inspection and Maintenance. As an example; the 368 Day Inspection/Maintenance will include those items specific to the 368 Day interval in addition to all items required for the Class I Brake Test, Daily Interior/Exterior, 30 Day Filter change and 184 Day Inspection/Maintenance.

Periodic Inspections and Maintenance

- Class I Brake Test
- Interior/Exterior Calendar Day Inspection
- 30 Day HVAC Filter Renewal
- 184 Day Inspection/Maintenance
- 368 Day Inspection/Maintenance
- 1476 Day Inspection/Maintenance
- 8 Year (second 1476 Day

Reliability Centered Maintenance Additions

All of these coaches have either completed CRASP in 2006-2008, or similar work through PI's in 2009-2010. It is anticipated that retirement of these coaches will begin in 2013, as the new bi-level coaches being procured from Hyundai-Rotem replace them.

With the current uncertainty on delivery and acceptance rate of the Hyundai-Rotem coaches; it is recommended that the following be performed on those coaches expected to remain in service until FY 2015

368-Day Inspection/Maintenance

- ➢ Clean all HVAC Evaporator and Condenser Coils
- ➢ Clean, lubricate and adjust all vestibule door tracks and operating dampers
- ➢ Test and repair all protective heat (trap door heaters)

Initiatives

It is recommended that the retirement of these coaches be accomplished in the following order:

1. Equipment that presents a poor customer experience
2. Equipment due for major repair or 1472-Day Inspection
3. Equipment which has a poor Mean Distance Between Failure (MDBF)

Equipment | **iii) CTC-3 MBB 1500-1533**

Assumptions:

Retirement date FY 2014

Inspection/Maintenance Intervals

Each Inspection and Maintenance performed at designated interval will be fully compliant with all Code of Federal Regulations (CFR) as well as all current MBTA requirements and APTA Standards and Recommended Practices for Passenger Equipment.

Each Inspection and Maintenance activity will build on and include all elements of the preceding Inspection and Maintenance. As an example; the 368 Day Inspection/Maintenance will include those items specific to the 368 Day interval in addition to all items required for the Class I Brake Test, Daily Interior/Exterior, 30 Day Filter change, 92 Day Inspection/Maintenance and 184 Day Inspection/Maintenance

Periodic Inspections and Maintenance

- Class I Brake Test
- Interior/Exterior Calendar Day Inspection
- 30 Day HVAC Filter Renewal
- 92 Day Inspection/Maintenance
- 184 Day Inspection/Maintenance
- 368 Day Inspection/Maintenance
- 1104 Day Inspection/Maintenance
- 1476 Day Inspection/Maintenance
- 2208 Day Inspection/Maintenance
- 4416 Day Inspection/Maintenance

Reliability Centered Maintenance Additions

All of these coaches have either completed CRASP in 2006-2008, or similar work through PI's in 2009-2010. It is anticipated that retirement of these coaches will begin in 2013, as the new bi-level coaches being procured from Hyundai-Rotem replace them.

With the current uncertainty on delivery and acceptance rate of the Hyundai-Rotem coaches; it is recommended that the following be performed on those coaches expected to remain in service until FY 2015

368-Day Inspection/Maintenance

- ➢ Clean all HVAC Evaporator and Condenser Coils
- ➢ Clean, lubricate and adjust all vestibule door tracks and operating dampers
- ➢ Test and repair all protective heat (trap door heaters)

Initiatives

It is recommended that the retirement of these coaches be accomplished in the following order:

1. Equipment that presents a poor customer experience
2. Equipment due for major repair or 1104-Day Inspection (see Note #1)
3. Equipment which has a poor Mean Distance Between Failure (MDBF)

Note #1: MBCR is currently performing Periodic brake equipment maintenance (COT&S) at an interval of 736 Days. It is recommended that this be increased to the intervals allowed by § 238.309 Periodic brake equipment maintenance, which reads in part;

(e) *Cab cars.* The brake equipment of each cab car shall be cleaned, repaired, and tested at intervals in accordance with the following schedule:

(2) Every 1,476 days for that portion of the cab car brake system using brake valves that are identical to the passenger coach 26-C brake system;

(3) Every 1,104 days for that portion of the cab car brake system using brake valves that are identical to the locomotive 26-L brake system

Equipment | **iv) BTB-1B 600-series**

Assumptions:

Retirement date FY 2020
Truck Overhaul performed FY 2008 (at time of CRASP)
Side Body Window Replacement completed FY 2010 (2011-2015 Fleet Management Plan

Inspection/Maintenance Intervals

Each Inspection and Maintenance performed at designated interval will be fully compliant with all Code of Federal Regulations (CFR) as well as all current MBTA requirements and APTA Standards and Recommended Practices for Passenger Equipment.

Each Inspection and Maintenance activity will build on and include all elements of the preceding Inspection and Maintenance. As an example; the 368 Day Inspection/Maintenance will include those items specific to the 368 Day interval in addition to all items required for the Class I Brake Test, Daily Interior/Exterior, 30 Day Filter change and 184 Day Inspection/Maintenance.

Periodic Inspections and Maintenance

- Class I Brake Test
- Interior/Exterior Calendar Day Inspection
- 30 Day HVAC Filter Renewal
- 184 Day Inspection/Maintenance
- 368 Day Inspection/Maintenance
- 1476 Day Inspection/Maintenance
- 8 Year (second 1476 Day)

Reliability Centered Maintenance Additions

368-Day Inspection/Maintenance

- ➢ Clean all HVAC Evaporator and Condenser Coils
- ➢ Clean, lubricate and adjust all vestibule door tracks and operating dampers
- ➢ Test and repair all protective heat (trap door heaters)

1476-Day Inspection/Maintenance

- Truck Overhaul
  1. All wheels replaced
  2. All Shock Absorbers and Yaw Dampeners replaced
  3. Springs and Bolster Qualified
  4. TBU Hoses replaced
  5. Spring Seats Inspected
  6. Pedestal Liners Inspected and replaced as required

Initiatives

- Design and Application and testing of Low Level Path Marking (LLPM) per APTA Safety Standard
- Testing of Emergency lighting per APTA Standard
- Replacement/Application of Emergency Signage per APTA Safety Standard

Equipment iv continued) BTB-1A 300-series

Assumptions:

Retirement date FY 2015
Truck Overhaul performed FY 2008 (at time of CRASP)
Side Body Window Replacement completed FY 2010 (2011-2015 Fleet Management Plan

Inspection/Maintenance Intervals

Each Inspection and Maintenance performed at designated interval will be fully compliant with all Code of Federal Regulations (CFR) as well as all current MBTA requirements and APTA Standards and Recommended Practices for Passenger Equipment.

Each Inspection and Maintenance activity will build on and include all elements of the preceding Inspection and Maintenance. As an example; the 368 Day Inspection/Maintenance will include those items specific to the 368 Day interval in addition to all items required for the Class I Brake Test, Daily Interior/Exterior, 30 Day Filter change and 184 Day Inspection/Maintenance

Periodic Inspections and Maintenance

- Class I Brake Test
- Interior/Exterior Calendar Day Inspection
- 30 Day HVAC Filter Renewal
- 184 Day Inspection/Maintenance
- 368 Day Inspection/Maintenance
- 1476 Day Inspection/Maintenance
- 8 Year (second 1476 Day)

Reliability Centered Maintenance Additions

All of these coaches have either completed CRASP in 2006-2008, or similar work through PI's in 2009-2010. It is anticipated that retirement of these coaches will begin in 2013, as the new bi-level coaches being procured from Hyundai-Rotem replace them.

With the current uncertainty on delivery and acceptance rate of the Hyundai-Rotem coaches; it is recommended that the following be performed on those coaches expected to remain in service until FY 2015

368-Day Inspection/Maintenance

- ➢ Clean all HVAC Evaporator and Condenser Coils
- ➢ Clean, lubricate and adjust all vestibule door tracks and operating dampers
- ➢ Test and repair all protective heat (trap door heaters)

Initiatives

It is recommended that the retirement of these coaches be accomplished in the following order:

1. Equipment that presents a poor customer experience
2. Equipment due for major repair or 1472-Day Inspection
3. Equipment, which has a poor Mean Distance Between Failure (MDBF)

Equipment | v) CTC-1B 1600-series (1600-1624)

Assumptions:

Retirement date FY 2020

- Truck Overhaul performed FY 2008 (at time of CRASP)
- Side Body Window Replacement completed FY 2010 (2011-2015 Fleet Management Plan)

Inspection/Maintenance Intervals

Each Inspection and Maintenance performed at designated interval will be fully compliant with all Code of Federal Regulations (CFR) as well as all current MBTA requirements and APTA Standards and Recommended Practices for Passenger Equipment.

Each Inspection and Maintenance activity will build on and include all elements of the preceding Inspection and Maintenance. As an example; the 368 Day Inspection/Maintenance will include those items specific to the 368 Day interval in addition to all items required for the Class I Brake Test, Daily Interior/Exterior, 30 Day Filter change and 184 Day Inspection/Maintenance

Periodic Inspections and Maintenance

- Class I Brake Test
- Interior/Exterior Calendar Day Inspection
- 30 Day HVAC Filter Renewal
- 184 Day Inspection/Maintenance
- 368 Day Inspection/Maintenance
- 1476 Day Inspection/Maintenance
- 8 Year (second 1476 Day)

Reliability Centered Maintenance Additions

368-Day Inspection/Maintenance

- ➢ Clean all HVAC Evaporator and Condenser Coils
- ➢ Clean, lubricate and adjust all vestibule door tracks and operating dampers
- ➢ Test and repair all protective heat (trap door heaters)

1476-Day Inspection/Maintenance

1. Truck Overhaul
2. All wheels replaced
3. All Shock Absorbers and Yaw Dampeners replaced
4. Springs and Bolster Qualified
5. TBU Hoses replaced
6. Spring Seats Inspected

Pedestal Liners Inspected and replaced as required

Initiatives

- Design and Application and testing of Low Level Path Marking (LLPM) per APTA Safety Standard
- Testing of Emergency lighting per APTA Standard
- Replacement/Application of Emergency Signage per APTA Safety Standard

Equipment v continued) CTC-1B 1600-series (1625-1652)

Assumptions:

Retirement date FY 2015

Inspection/Maintenance Intervals

Each Inspection and Maintenance performed at designated interval will be fully compliant with all Code of Federal Regulations (CFR) as well as all current MBTA requirements and APTA Standards and Recommended Practices for Passenger Equipment.

Each Inspection and Maintenance activity will build on and include all elements of the preceding Inspection and Maintenance. As an example; the 368 Day Inspection/Maintenance will include those items specific to the 368 Day interval in addition to all items required for the Class I Brake Test, Daily Interior/Exterior, 30 Day Filter change and 92 Day Inspection/Maintenance

Periodic Inspections and Maintenance

- Class I Brake Test
- Interior/Exterior Calendar Day Inspection
- Daily Cab Signal Departure Test
- 30 Day HVAC Filter Renewal
- 92 Day Inspection/Maintenance
- 184 Day Inspection/Maintenance
- 368 Day Inspection/Maintenance
- 1104 Day Inspection/Maintenance (see note #1)
- 1476 Day Inspection/Maintenance
- 2208 Day Inspection/Maintenance
- 4416 Day Inspection/Maintenance

Reliability Centered Maintenance Additions

All of these coaches have either completed CRASP in 2006-2008, or similar work through PI's in 2009-2010. It is anticipated that retirement of these coaches will begin in 2013, as the new bi-level coaches being procured from Hyundai-Rotem replace them.

With the current uncertainty on delivery and acceptance rate of the Hyundai-Rotem coaches; it is recommended that the following be performed on those coaches expected to remain in service until FY 2015

368-Day Inspection/Maintenance

- ➢ Clean all HVAC Evaporator and Condenser Coils
- ➢ Clean, lubricate and adjust all vestibule door tracks and operating dampers
- ➢ Test and repair all protective heat (trap door heaters)

Initiatives

It is recommended that the retirement of these coaches be accomplished in the following order:

- Equipment that presents a poor customer experience
- Equipment due for major repair or 1104-Day Inspection (see Note #1)
- Equipment which has a poor Mean Distance Between Failure (MDBF)

Note #1: MBCR is currently performing Periodic brake equipment maintenance (COT&S) at an interval of 736 Days. It is recommended that this be increased to the intervals allowed by § 238.309 Periodic brake equipment maintenance, which reads in part;

(e) *Cab cars.* The brake equipment of each cab car shall be cleaned, repaired, and tested at intervals in accordance with the following schedule:

(2) Every 1,476 days for that portion of the cab car brake system using brake valves that are identical to the passenger coach 26-C brake system;

(3) Every 1,104 days for that portion of the cab car brake system using brake valves that are identical to the locomotive 26-L brake system;

Equipment | **vi) BTC-4, BTC-4A, BTC-4C Kawasaki 700-series (700-781)**

Assumptions:

Retirement date FY 2025-2027
Assumes completion of Mid-Life Overhaul FY 2014

Inspection/Maintenance Intervals

Each Inspection and Maintenance performed at designated interval will be fully compliant with all Code of Federal Regulations (CFR) as well as all current MBTA requirements and APTA Standards and Recommended Practices for Passenger Equipment.

Each Inspection and Maintenance activity will build on and include all elements of the preceding Inspection and Maintenance. As an example; the 368 Day Inspection/Maintenance will include those items specific to the 368 Day interval in addition to all items required for the Class I Brake Test, Daily Interior/Exterior, 30 Day Filter change and 184 Day Inspection/Maintenance

Periodic Inspections and Maintenance

- Class I Brake Test
- Interior/Exterior Calendar Day Inspection
- 30 Day HVAC Filter Renewal
- 184 Day Inspection/Maintenance
- 368 Day Inspection/Maintenance
- 1476 Day Inspection/Maintenance
- 8 Year (second 1476 Day)

Reliability Centered Maintenance Additions

368-Day Inspection/Maintenance

- ➢ Clean all HVAC Evaporator and Condenser Coils
- ➢ Clean, lubricate and adjust all vestibule door tracks and operating dampers
- ➢ Test and repair all protective heat (trap door heaters)
- ➢ Inspect/Date Handbrake

1472-Day Inspection/Maintenance

- Periodic Air Brake
  1. COT&S air valves per § 238.309 (e)(2)
- Truck
  1. All wheels replaced
  2. All Shock Absorbers and Yaw Dampeners replaced
  3. TBU Hoses replaced
  4. Pedestal Liners Inspected and replaced as required
- HVAC
  1. Replace roof mounted HVAC unit with serviced unit

Eight-Year Cycle

- Interior
  1. Seating renewal program
  2. Side body glazing renewal program
- HVAC
  1. Replace roof mounted HVAC unit with overhauled unit
- Truck
  1. All wheels replaced
  2. All Shock Absorbers and Yaw Dampeners replaced
  3. TBU Hoses replaced
  4. Pedestal Liners Inspected and replaced as required
  5. Qualify coil Springs and Air springs

Equipment — vii) CTC-4 Kawasaki 1700-series

Assumptions:

Retirement date FY 2025
Assumes completion of Mid-Life Overhaul FY 2014

Inspection/Maintenance Intervals

Each Inspection and Maintenance performed at designated interval will be fully compliant with all Code of Federal Regulations (CFR) as well as all current MBTA requirements and APTA Standards and Recommended Practices for Passenger Equipment.

Each Inspection and Maintenance activity will build on and include all elements of the preceding Inspection and Maintenance. As an example; the 368 Day Inspection/Maintenance will include those items specific to the 368 Day interval in addition to all items required for the Class I Brake Test, Daily Interior/Exterior, 30 Day Filter change and 92 Day Inspection/Maintenance

Periodic Inspections and Maintenance

- Class I Brake Test
- Interior/Exterior Calendar Day Inspection
- Daily Cab Signal Departure Test
- 30 Day HVAC Filter Renewal
- 92 Day Inspection/Maintenance
- 184 Day Inspection/Maintenance
- 368 Day Inspection/Maintenance
- 1104 Day Inspection/Maintenance (see note #1)
- 1476 Day Inspection/Maintenance
- 2208 Day Inspection/Maintenance
- 4416 Day Inspection/Maintenance

Reliability Centered Maintenance Additions

368-Day Inspection/Maintenance

- ➢ Clean all HVAC Evaporator and Condenser Coils
- ➢ Clean, lubricate and adjust all vestibule door tracks and operating dampers
- ➢ Test and repair all protective heat (trap door heaters)
- ➢ Inspect/Date Handbrake

1104-Day Inspection/Maintenance

- Periodic Air Brake
  1. COT&S air valves per § 238.309 (e)(3)

1476-Day Inspection/Maintenance

- Periodic Air Brake
  1. COT&S air valves per § 238.309 (e)(2)
- Truck
  1. All wheels replaced
  2. All Shock Absorbers and Yaw Dampeners replaced
  3. TBU Hoses replaced
  4. Pedestal Liners Inspected and replaced as required
- HVAC
  1. Replace roof mounted HVAC unit with serviced unit

Eight-Year Cycle

- Interior
  1. Seating renewal program
  2. Side body glazing renewal program
- HVAC
  3. Replace roof mounted HVAC unit with overhauled unit
- Truck
  1. All wheels replaced
  2. All Shock Absorbers and Yaw Dampeners replaced
  3. TBU Hoses replaced
  4. Pedestal Liners Inspected and replaced as required

Qualify coil Springs and Air springs

Initiatives

Note #1: MBCR is currently performing Periodic brake equipment maintenance (COT&S) at an interval of 736 Days. It is recommended that this be increased to the intervals allowed by § 238.309 Periodic brake equipment maintenance, which reads in part;

(e) Cab cars. The brake equipment of each cab car shall be cleaned, repaired, and tested at intervals in accordance with the following schedule:

(2) Every 1,476 days for that portion of the cab car brake system using brake valves that are identical to the passenger coach 26-C brake system;

(3) Every 1,104 days for that portion of the cab car brake system using brake valves that are identical to the locomotive 26-L brake system;

Equipment — viii) BTC-4C Kawasaki 900-series (900-932)

Assumptions:

Retirement date FY 2030
Assumes completion of Mid-Life Overhaul FY 2018

Inspection/Maintenance Intervals

Each Inspection and Maintenance performed at designated interval will be fully compliant with all Code of Federal Regulations (CFR) as well as all current MBTA requirements and APTA Standards and Recommended Practices for Passenger Equipment.

Each Inspection and Maintenance activity will build on and include all elements of the preceding Inspection and Maintenance. As an example; the 368 Day Inspection/Maintenance will include those items specific to the 368 Day interval in addition to all items required for the Class I Brake Test, Daily Interior/Exterior, 30 Day Filter change and 184 Day Inspection/Maintenance

Periodic Inspections and Maintenance

- Class I Brake Test
- Interior/Exterior Calendar Day Inspection
- 30 Day HVAC Filter Renewal
- 184 Day Inspection/Maintenance
- 368 Day Inspection/Maintenance
- 1476 Day Inspection/Maintenance
- 8 Year (second 1476 Day)

Reliability Centered Maintenance Additions

368-Day Inspection/Maintenance
- ➢ Clean all HVAC Evaporator and Condenser Coils
- ➢ Clean, lubricate and adjust all vestibule door tracks and operating dampers
- ➢ Test and repair all protective heat (trap door heaters)
- ➢ Inspect/Date Handbrake

1472-Day Inspection/Maintenance
- Periodic Air Brake
  1. COT&S air valves per § 238.309 (e)(2)
- Truck
  1. All wheels replaced
  2. All Shock Absorbers and Yaw Dampeners replaced
  3. TBU Hoses replaced
  4. Pedestal Liners Inspected and replaced as required
- HVAC
  1. Replace roof mounted HVAC unit with serviced unit

Eight-Year Cycle
- Interior
  1. Seating renewal program
  2. Side body glazing renewal program
- HVAC
  1. Replace roof mounted HVAC unit with overhauled unit
- Truck
  1. All wheels replaced
  2. All Shock Absorbers and Yaw Dampeners replaced
  3. TBU Hoses replaced
  4. Pedestal Liners Inspected and replaced as required
  5. Qualify coil Springs and Air springs
- Toilet Assembly
  1. Replace Toilet Operating Assembly with overhauled unit

Equipment ix) BTC-4D Hyundai-Rotem 800-series (800-846)

Assumptions:

Retirement date FY 2038

Inspection/Maintenance Intervals

Each Inspection and Maintenance performed at designated interval will be fully compliant with all Code of Federal Regulations (CFR) as well as all current MBTA requirements and APTA Standards and Recommended Practices for Passenger Equipment.

Each Inspection and Maintenance activity will build on and include all elements of the preceding Inspection and Maintenance. As an example; the 368 Day Inspection/Maintenance will include those items specific to the 368 Day interval in addition to all items required for the Class I Brake Test, Daily Interior/Exterior, 30 Day Filter change and 184 Day Inspection/Maintenance

Periodic Inspections and Maintenance

- Class I Brake Test
- Interior/Exterior Calendar Day Inspection
- 30 Day HVAC Filter Renewal
- 184 Day Inspection/Maintenance
- 368 Day Inspection/Maintenance
- 1476 Day Inspection/Maintenance
- 8 Year (second 1476 Day)

Reliability Centered Maintenance Additions

368-Day Inspection/Maintenance

- ➢ Clean all HVAC Evaporator and Condenser Coils
- ➢ Clean, lubricate and adjust all vestibule door tracks and operating dampers
- ➢ Test and repair all protective heat (trap door heaters)
- ➢ Inspect/Date Handbrake

1472-Day Inspection/Maintenance

- Periodic Air Brake
  1. COT&S air valves per § 238.309 (e)(2)
- Truck
  1. All wheels replaced
  2. All Shock Absorbers and Yaw Dampeners replaced
  3. TBU Hoses replaced
  4. Pedestal Liners Inspected and replaced as required

Five-Year Cycle

- HVAC
  1. Replace roof mounted HVAC unit with serviced unit

Eight-Year Cycle

- Interior
  1. Seating renewal program
  2. Side body glazing renewal program
- Truck
  1. All wheels replaced
  2. All Shock Absorbers and Yaw Dampeners replaced
  3. TBU Hoses replaced
  4. Pedestal Liners Inspected and replaced as required
  5. Qualify coil Springs and Air springs
- Toilet Assembly
  1. Replace Toilet Operating Assembly with overhauled unit

Ten-Year Cycle

- HVAC
  1. Replace roof mounted HVAC unit with overhauled unit

Twelve-Year Cycle

- Doors

Overhaul Door System

Equipment | **x) CTC-5 Hyundai-Rotem 1800-series (1800-1827)**

Assumptions:

Retirement date FY 2038

Inspection/Maintenance Intervals

Each Inspection and Maintenance performed at designated interval will be fully compliant with all Code of Federal Regulations (CFR) as well as all current MBTA requirements and APTA Standards and Recommended Practices for Passenger Equipment.

Each Inspection and Maintenance activity will build on and include all elements of the preceding Inspection and Maintenance. As an example; the 368 Day Inspection/Maintenance will include those items specific to the 368 Day interval in addition to all items required for the Class I Brake Test, Daily Interior/Exterior, 30 Day Filter change and 92 Day Inspection/Maintenance

Periodic Inspections and Maintenance

- Class I Brake Test
- Interior/Exterior Calendar Day Inspection
- Daily Cab Signal Departure Test
- 30 Day HVAC Filter Renewal
- 92 Day Inspection/Maintenance
- 184 Day Inspection/Maintenance
- 368 Day Inspection/Maintenance
- 1104 Day Inspection/Maintenance (see note #1)
- 1476 Day Inspection/Maintenance
- 2208 Day Inspection/Maintenance
- 4416 Day Inspection/Maintenance

Reliability Centered Maintenance Additions

368-Day Inspection/Maintenance

- ➢ Clean all HVAC Evaporator and Condenser Coils
- ➢ Clean, lubricate and adjust all vestibule door tracks and operating dampers
- ➢ Test and repair all protective heat (trap door heaters)
- ➢ Inspect/Date Handbrake

1472-Day Inspection/Maintenance

- Periodic Air Brake
  1. COT&S air valves per § 238.309 (e)(2)
- Truck
  1. All wheels replaced
  2. All Shock Absorbers and Yaw Dampeners replaced
  3. TBU Hoses replaced
  4. Pedestal Liners Inspected and replaced as required

1840 Day Inspection/Maintenance

- Periodic Air Brake
  1. COT&S air valves per § 238.309 (e)(1)
- HVAC
  1. Replace roof mounted HVAC unit with serviced unit
- Monitor and Control Unit
  1. Replace Battery

Eight-Year Cycle

- Interior
  1. Seating renewal program
  2. Side body glazing renewal program
- Truck
  1. All wheels replaced
  2. All Shock Absorbers and Yaw Dampeners replaced
  3. TBU Hoses replaced
  4. Pedestal Liners Inspected and replaced as required
  5. Qualify coil Springs and Air springs
  6. Toilet Assembly
  7. Replace Toilet Operating Assembly with overhauled unit

Ten-Year Cycle

- HVAC
  1. Replace roof mounted HVAC unit with overhauled unit
- Monitor and Control Unit
  1. Replace Operator Display Screen (ODS)

Twelve-Year Cycle

- Doors
  1. Overhaul Door System

Equipment xi) F40PH-2 (1000 - 1017)

Assumptions:

Bombardier overhauled the F40PH-2 locomotives in 1989-1990. To increase reliability and service life, these locomotives underwent a top-deck overhaul program, which was completed in 2004.

Retirement date FY 2014

Inspection/Maintenance Intervals

Each Inspection and Maintenance performed at designated interval will be fully compliant with all Code of Federal Regulations (CFR) as well as all current MBTA requirements and APTA Standards and Recommended Practices for Passenger Equipment.

Each Inspection and Maintenance activity will build on and include all elements of the preceding Inspection and Maintenance. As an example; the 368 Day Inspection/Maintenance will include those items specific to the 368 Day interval in addition to all items required for the Class I Brake Test, Daily Interior/Exterior, 45 Day Filter change and 92 Day Inspection/Maintenance

Periodic Inspections and Maintenance

- Class I Brake Test
- Interior/Exterior Calendar Day Inspection
- Daily Cab Signal Departure Test
- 45 Day Inspection/Maintenance Cab Signal System Test
- 92 Day Inspection/Maintenance
- 184 Day Inspection/Maintenance
- 368 Day Inspection/Maintenance
- 1104 Day Inspection/Maintenance
- 1472 Day Inspection/Maintenance
- 2208 Day Inspection/Maintenance
- 4416 Day Inspection/Maintenance

Reliability Centered Maintenance Additions

All of these locomotives have received a Top-Deck Overhaul in FY 2004. It is anticipated that retirement of these locomotives will begin in 2014, as the new MPI HSP-46 locomotives procured from Motive Power replace them.

With the impending retirement date of 2014, it is recommended that these locomotives not be placed in a Reliability Centered Maintenance Plan.

Initiatives

It is recommended that the retirement of these Locomotives be accomplished in the following order:

1. Those Locomotives requiring extensive repair work
2. Locomotives due for major Air Brake work (1104- Day Inspection and Maintenance)
3. Locomotives with poor MDBF
4. Explore the extension of 1104-Day Air Brake Inspection and Maintenance as per 49 CFR 229.29.

§ 229.29(3)(f)(2) Which reads

(f) Level two and level three air brake maintenance and testing shall be performed on each locomotive identified in this paragraph at the following intervals:

(2) At intervals that do not exceed 1,472 days for locomotives equipped with an air dryer and a 26-L or equivalent brake system and for locomotives not equipped with an air compressor and that are semi-permanently coupled and dedicated to locomotives with an air dryer

Equipment xii) F40PHM-2C (1025 - 1036)

Assumptions:

The F40PH-2C locomotives completed a mid-life overhaul in 2004, which included the installation of a new 9-aspect cab signal system, air conditioning, a new 600 KW HEP power plant, and a Tier 0 compliant main engine.

Retirement date FY 2020

Top Deck Overhaul will be completed FY 2015 (2011-2015 Fleet Management Plan)

Inspection/Maintenance Intervals

Each Inspection and Maintenance performed at designated interval will be fully compliant with all Code of Federal Regulations (CFR) as well as all current MBTA requirements and APTA Standards and Recommended Practices for Passenger Equipment.

Each Inspection and Maintenance activity will build on and include all elements of the preceding Inspection and Maintenance. As an example; the 368 Day Inspection/Maintenance will include those items specific to the 368 Day interval in addition to all items required for the Class I Brake Test, Daily Interior/Exterior, 45 Day Filter change and 92 Day Inspection/Maintenance

Periodic Inspections and Maintenance

- Class I Brake Test
- Interior/Exterior Calendar Day Inspection
- Daily Cab Signal Departure Test
- 45 Day Inspection/Maintenance Cab Signal System Test
- 92 Day Inspection/Maintenance
- 184 Day Inspection/Maintenance
- 368 Day Inspection/Maintenance
- 1104 Day Inspection/Maintenance
- 1472 Day Inspection/Maintenance
- 2208 Day Inspection/Maintenance
- 4416 Day Inspection/Maintenance

Reliability Centered Maintenance Additions

368-Day Inspection/Maintenance

- Clean Main Engine and HEP Radiators
- Verify temperature control (fans and shutters)
- Perform Air Drier Maintenance
- Renew HEP Turbo Charger
- Renew HEP Fuel Injectors
- Renew Main Engine and HEP lubrication oil
- Renew Main Engine Injectors and high pressure fuel pump (every other 368 Day)

1104-Day Inspection/Maintenance

- Load box Main and HEP Engine
- Renew Suspension Bearing oil and suspension bearing lubricating wicks

Initiatives

Trucks:

1. Perform an Engineering inspection of each truck to determine condition and remedial action necessary to ensure safe performance until FY 2020
2. Explore changing 45 Day Cab Signal Test to 92 Day Test

§ 236.588 Periodic test.

Except as provided in § 236.586, periodic test of the automatic train stop, train control, or cab signal apparatus shall be made at least once every 92 days, and on multiple-unit cars as specified by the carrier, subject to approval by the FRA.

[49 FR 3387, Jan. 26, 1984]

3. Explore the extension of 1104-Day Air Brake Inspection and Maintenance as per 49 CFR 229.29.

§ 229.29(3)(f)(2) Which reads

(f) Level two and level three air brake maintenance and testing shall be performed on each locomotive identified in this paragraph at the following intervals:

(2) At intervals that do not exceed 1,472 days for locomotives equipped with an air dryer and a 26-L or equivalent brake system and for locomotives not equipped with an air compressor and that are semi-permanently coupled and dedicated to locomotives with an air dryer

Equipment xiii) F40PH-2C (1050 - 1075)

Assumptions:

The F40PH-2C locomotives completed a mid-life overhaul in 2003, which included the installation of a new 9-aspect cab signal system, air conditioning and a new 600 KW HEP power plant.

Retirement date FY 2020

Top Deck Overhaul will be completed FY 2015 (2011-2015 Fleet Management Plan)

Inspection/Maintenance Intervals

Each Inspection and Maintenance performed at designated interval will be fully compliant with all Code of Federal Regulations (CFR) as well as all current MBTA requirements and APTA Standards and Recommended Practices for Passenger Equipment.

Each Inspection and Maintenance activity will build on and include all elements of the preceding Inspection and Maintenance. As an example; the 368 Day Inspection/Maintenance will include those items specific to the 368 Day interval in addition to all items required for the Class I Brake Test, Daily Interior/Exterior, 45 Day Filter change and 92 Day Inspection/Maintenance

Periodic Inspections and Maintenance

- Class I Brake Test
- Interior/Exterior Calendar Day Inspection
- Daily Cab Signal Departure Test
- 45 Day Inspection/Maintenance Cab Signal System Test
- 92 Day Inspection/Maintenance
- 184 Day Inspection/Maintenance
- 368 Day Inspection/Maintenance
- 1104 Day Inspection/Maintenance
- 1472 Day Inspection/Maintenance
- 2208 Day Inspection/Maintenance
- 4416 Day Inspection/Maintenance

Reliability Centered Maintenance Additions

368-Day Inspection/Maintenance

- Clean Main Engine and HEP Radiators
- Verify temperature control (fans and shutters)
- Perform Air Drier Maintenance
- Renew HEP Turbo Charger
- Renew HEP Fuel Injectors
- Renew Main Engine and HEP lubrication oil
- Renew Main Engine Injectors and high pressure fuel pump (every other 368 Day)

1104-Day Inspection/Maintenance

- Load box Main and HEP Engine
- Renew Suspension Bearing oil and suspension bearing lubricating wicks

Initiatives

It is recommended that the retirement of these Locomotives be accomplished in the following order:

1. Those Locomotives requiring extensive repair work
2. Locomotives due for major Air Brake work (1104- Day Inspection and Maintenance)
3. Locomotives with poor MDBF
4. Explore the extension of 1104-Day Air Brake Inspection and Maintenance as per 49 CFR 229.29.

§ 229.29(3)(f)(2) Which reads

(f) Level two and level three air brake maintenance and testing shall be performed on each locomotive identified in this paragraph at the following intervals:

(2) At intervals that do not exceed 1,472 days for locomotives equipped with an air dryer and a 26-L or equivalent brake system and for locomotives not equipped with an air compressor and that are semi-permanently coupled and dedicated to locomotives with an air dryer

Equipment xiv) GP40MC (1115 - 1139)

Assumptions:

Retirement date FY 2015

Top Deck Overhaul completed FY 2011 (2011-2015 Fleet Management Plan)

Inspection/Maintenance Intervals

Each Inspection and Maintenance performed at designated interval will be fully compliant with all Code of Federal Regulations (CFR) as well as all current MBTA requirements and APTA Standards and Recommended Practices for Passenger Equipment.

Each Inspection and Maintenance activity will build on and include all elements of the preceding Inspection and Maintenance. As an example; the 368 Day Inspection/Maintenance will include those items specific to the 368 Day interval in addition to all items required for the Class I Brake Test, Daily Interior/Exterior, 45 Day Filter change and 92 Day Inspection/Maintenance

Periodic Inspections and Maintenance

- Class I Brake Test
- Interior/Exterior Calendar Day Inspection
- Daily Cab Signal Departure Test
- 45 Day Inspection/Maintenance Cab Signal System Test
- 92 Day Inspection/Maintenance
- 184 Day Inspection/Maintenance
- 368 Day Inspection/Maintenance
- 1104 Day Inspection/Maintenance
- 1472 Day Inspection/Maintenance
- 1840 Day Inspection/Maintenance
- 2208 Day Inspection/Maintenance
- 4416 Day Inspection/Maintenance

Reliability Centered Maintenance Additions

All of these locomotives coaches have received a Top-Deck Overhaul in FY 2011. It is anticipated that retirement of these locomotives will begin in 2014, as the new MPI HSP-46 locomotives procured from Motive Power replace them.

With the impending retirement date of 2014, it is recommended that these locomotives not be placed in a Reliability Centered Maintenance Plan.

Initiatives

It is recommended that the retirement of these Locomotives be accomplished in the following order:

1. Those Locomotives requiring extensive repair work
2. Locomotives due for major Air Brake work (1840- Day Inspection and Maintenance)
3. Locomotives with poor MDBF

Equipment xv) MP36PH-3C (010 - 011)

Assumptions:

Retirement date FY 2035
Top Deck Overhaul will be completed FY 2015 (2011-2015 Fleet Management Plan)
Mid-Life Overhaul FY 2021

Inspection/Maintenance Intervals

Each Inspection and Maintenance performed at designated interval will be fully compliant with all Code of Federal Regulations (CFR) as well as all current MBTA requirements and APTA Standards and Recommended Practices for Passenger Equipment.

Each Inspection and Maintenance activity will build on and include all elements of the preceding Inspection and Maintenance. As an example; the 368 Day Inspection/Maintenance will include those items specific to the 368 Day interval in addition to all items required for the Class I Brake Test, Daily Interior/Exterior, 45 Day Filter change and 92 Day Inspection/Maintenance

Periodic Inspections and Maintenance

- Class I Brake Test
- Interior/Exterior Calendar Day Inspection
- Daily Cab Signal Departure Test
- 45 Day Inspection/Maintenance Cab Signal System Test
- 92 Day Inspection/Maintenance
- 184 Day Inspection/Maintenance
- 368 Day Inspection/Maintenance
- 1104 Day Inspection/Maintenance
- 1472 Day Inspection/Maintenance
- 2208 Day Inspection/Maintenance
- 4416 Day Inspection/Maintenance

Reliability Centered Maintenance Additions

- 368-Day Inspection/ Maintenance
- Clean Main Engine and HEP Radiators
- Verify temperature control (fans and shutters)
- Perform Air Drier Maintenance
- Renew HEP Turbo Charger
- Renew HEP Fuel Injectors
- Renew Main Engine and HEP lubrication oil
- Renew Air Compressor Oil
- Renew Main Engine Injectors and high pressure fuel pump (every other 368 Day)
- 1104-Day Inspection/ Maintenance
- Load Box HEP Engine
- Overhaul Shutter Valves
- Overhaul Air Compressor Heads
- Overhaul Cab Air Conditioning Unit

Initiatives

- Trucks:
  1. Truck Overhaul program beginning FY 2015-2016
- Main Engine:
  1. Top Deck Overhaul FY 2015
  2. Replace Turbo Charger FY 2015
  3. Replace Air Compressor FY 2015
- HEP
  1. Overhaul HEP Engine and Alternator (per MBTA Specification)
- Engineers Cab:
  1. Renew Engineers and Fireman Seat FY 2015

Explore changing 45 Day Cab Signal Test to 92 Day Test

§ 236.588 Periodic test.

Except as provided in § 236.586, periodic test of the automatic train stop, train control, or cab signal apparatus shall be made at least once every 92 days, and on multiple-unit cars as specified by the carrier, subject to approval by the FRA.

[49 FR 3387, Jan. 26, 1984]

Explore the extension of 1104-Day Air Brake Inspection and Maintenance as per 49 CFR 229.29.

§ 229.29(3)(f)(2) Which reads

(f) Level two and level three air brake maintenance and testing shall be performed on each locomotive identified in this paragraph at the following intervals:

(2) At intervals that do not exceed 1,472 days for locomotives equipped with an air dryer and a 26-L or equivalent brake system and for locomotives not equipped with an air compressor and that are semi-permanently coupled and dedicated to locomotives with an air dryer

Equipment — xvi) MPI HSP-46 (1200 - 1239)

Assumptions:

Unit is equipped with WABTEC @Fastbrake
Static Inverter for HEP Power
A/C Traction
Retirement date FY 2042

Inspection/Maintenance Intervals

Each Inspection and Maintenance performed at designated interval will be fully compliant with all Code of Federal Regulations (CFR) as well as all current MBTA requirements and APTA Standards and Recommended Practices for Passenger Equipment.

Each Inspection and Maintenance activity will build on and include all elements of the preceding Inspection and Maintenance. As an example; the 368 Day Inspection/Maintenance will include those items specific to the 368 Day interval in addition to all items required for the Class I Brake Test, Daily Interior/Exterior, 45 Day Filter change and 92 Day Inspection/Maintenance

Periodic Inspections and Maintenance

- Class I Brake Test
- Interior/Exterior Calendar Day Inspection
- Daily Cab Signal Departure Test
- 45 Day Inspection/Maintenance Cab Signal System Test
- 92 Day Inspection/Maintenance
- 184 Day Inspection/Maintenance
- 368 Day Inspection/Maintenance
- 1104 Day Inspection/Maintenance
- 1472 Day Inspection/Maintenance
- 1840 Day Inspection/Maintenance
- 2208 Day Inspection/Maintenance
- 4416 Day Inspection/Maintenance

Reliability Centered Maintenance Additions

368-Day Inspection/Maintenance
- Clean Main Engine Radiators
- Verify temperature control (fans and shutters)
- Perform Air Drier Maintenance
- Renew Main Engine lubrication oil
- Renew Air Compressor Oil
- Renew Main Engine Injectors and high pressure fuel pumps (every other 368 Day)

1840-Day Inspection/Maintenance
- Trucks
  1. Renew wheels and traction motors with rebuilt units
  2. Inspect/Repair Pedestal liners and wear plates
- HVAC
  1. Renew Cab HVAC unit with overhauled unit

Ten-Year Interval
- Prime Mover and associated Equipment
  1. Renew Main Engine with UTEX unit
  2. Renew Turbo Charger
  3. Renew Air Compressor
  4. Renew Cooling Fans
  5. Renew wheels and traction motors
- Trucks
  1. Renew Wheels and Traction Motors with rebuilt units
  2. Inspect/Repair Pedestal liners and wear plates
  3. Renew all bushings and pins (Swing Hangers, Brake Levers, etc)
- Coupler/Draft Gear
  1. Renew/rebuild "B" end coupler

Initiatives

Control, or cab signal apparatus shall be made at least once every 92 days, and on multiple-unit cars as specified by the carrier, subject to approval by the FRA.

[49 FR 3387, Jan. 26, 1984]

Explore the extension of 1104-Day Air Brake Inspection and Maintenance as per 49 CFR 229.29.

§ 229.29(3)(f)(2) Which reads

(f) Level two and level three air brake maintenance and testing shall be performed on each locomotive identified in this paragraph at the following intervals:

(2) At intervals that do not exceed 1,472 days for locomotives equipped with an air dryer and a 26-L or equivalent brake system and for locomotives not equipped with an air compressor and that are semi-permanently coupled and dedicated to locomotives with an air dryer

4.B.2. Maintenance Cost Schedules for Each Fleet

ATTACHMENT 4 TO APPENDIX B
MAINTENANCE COST SCHEDULE (MCS) FOR NEW LOCOMOTIVES

ANNUAL UNIT COST FOR MAINTAINING NEW LOCOMOTIVES
ANNUAL MAINTENANCE COST - BASED ON THE YEAR LOCOMOTIVE IS PUT IN SERVICE

NEW LOCOMOTIVES
MPI - HSP46

	Annual Unit Cost for Maintaining New Locomotives - by Service Year								
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Note:
Locomotive Put in Service in Year 1	$137,773	$143,631	$213,923	$219,601	$225,012	$231,500	$238,152	$245,064	Unit cost - provided by Proposer
Locomotive Put in Service in Year 2	N/A	$141,907	$147,940	$220,341	$226,189	$231,762	$238,445	$245,296	Unit cost - provided by Proposer
Locomotive Put in Service in Year 3	N/A	N/A	$146,164	$152,378	$226,951	$232,975	$238,715	$245,598	Unit cost - provided by Proposer
Locomotive Put in Service in Year 4	N/A	N/A	N/A	$150,549	$156,949	$233,760	$239,964	$245,877	Unit cost - provided by Proposer
Locomotive Put in Service in Year 5	N/A	N/A	N/A	N/A	$155,065	$161,658	$240,773	$247,163	Unit cost - provided by Proposer
Locomotive Put in Service in Year 6	N/A	N/A	N/A	N/A	N/A	$159,717	$166,508	$247,996	Unit cost - provided by Proposer
Locomotive Put in Service in Year 7	N/A	N/A	N/A	N/A	N/A	N/A	$164,509	$171,503	Unit cost - provided by Proposer
Locomotive Put in Service in Year 8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	$169,444	Unit cost - provided by Proposer

NOTES:

Cost includes both preventative and corrective maintenance, consistent with the manufacturer's requirements and warranty provisions.

Proposer to enter cost data in cells:

Figure 4-59: MCS for New Locomotives (Annual Unit Cost)

ATTACHMENT 5 TO APPENDIX B
MAINTENANCE COST SCHEDULE (MCS) FOR NEW COACHES

ANNUAL UNIT COST FOR MAINTAINING NEW COACHES
ANNUAL MAINTENANCE COST - BASED ON THE YEAR COACH IS PUT IN SERVICE

NEW COACHES
ROTEM 1800 (CTC-5)

	Annual Unit Cost for Maintaining New Coaches - by Service Year								
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Note: **1800 Series**
Coach Put in Service in Year 1	$119,773	$124,898	$156,841	$160,184	$163,578	$167,454	$171,906	$177,123	Unit cost - provided by Proposer
Coach Put in Service in Year 2	N/A	$123,366	$128,645	$161,546	$164,989	$168,485	$172,478	$177,064	Unit cost - provided by Proposer
Coach Put in Service in Year 3	N/A	N/A	$127,067	$132,504	$166,392	$169,939	$173,540	$177,652	Unit cost - provided by Proposer
Coach Put in Service in Year 4	N/A	N/A	N/A	$130,879	$136,479	$171,384	$175,037	$178,746	Unit cost - provided by Proposer
Coach Put in Service in Year 5	N/A	N/A	N/A	N/A	$134,805	$140,574	$176,526	$180,288	Unit cost - provided by Proposer
Coach Put in Service in Year 6	N/A	N/A	N/A	N/A	N/A	$138,850	$144,791	$181,821	Unit cost - provided by Proposer
Coach Put in Service in Year 7	N/A	N/A	N/A	N/A	N/A	N/A	$143,015	$149,135	Unit cost - provided by Proposer
Coach Put in Service in Year 8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	$147,306	Unit cost - provided by Proposer

NEW COACHES
ROTEM 800 (BTC-4D)

	Annual Unit Cost for Maintaining New Coaches - by Service Year								
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Note: **800 Series**
Coach Put in Service in Year 1	$110,369	$114,874	$130,605	$133,459	$136,352	$139,627	$143,535	$148,051	Unit cost - provided by Proposer
Coach Put in Service in Year 2	N/A	$113,680	$118,320	$134,523	$137,462	$140,443	$143,816	$147,841	Unit cost - provided by Proposer
Coach Put in Service in Year 3	N/A	N/A	$117,090	$121,870	$138,559	$141,586	$144,656	$148,131	Unit cost - provided by Proposer
Coach Put in Service in Year 4	N/A	N/A	N/A	$120,603	$125,526	$142,716	$145,834	$148,996	Unit cost - provided by Proposer
Coach Put in Service in Year 5	N/A	N/A	N/A	N/A	$124,221	$129,292	$146,997	$150,209	Unit cost - provided by Proposer
Coach Put in Service in Year 6	N/A	N/A	N/A	N/A	N/A	$127,948	$133,171	$151,407	Unit cost - provided by Proposer
Coach Put in Service in Year 7	N/A	N/A	N/A	N/A	N/A	N/A	$131,786	$137,166	Unit cost - provided by Proposer
Coach Put in Service in Year 8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	$135,740	Unit cost - provided by Proposer

NOTES:

Cost includes both preventative and corrective maintenance, consistent with the manufacturer's requirements and warranty provisions.

Proposer to enter cost data in cells:

Figure 60: MCS for New Coaches (Annual Unit Cost)

ATTACHMENT 6 TO APPENDIX B
MAINTENANCE COST SCHEDULE (MCS) FOR OVERHAULED COACHES

ANNUAL UNIT COST FOR MAINTAINING OVERHAULED COACHES
ANNUAL MAINTENANCE COST - BASED ON THE YEAR OVERHAULED COACH IS PUT BACK IN SERVICE

OVERHAULED COACHES
KAWASAKI 1700 (CTC-4)

	Annual Unit Cost for Maintaining Overhauled Coaches - by Service Year								
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Note: 1700 Series
Coach Overhauled in Year 1	$135,886	$165,084	$170,554	$173,876	$177,244	$181,158	$185,575	$190,862	Unit cost - provided by Proposer
Coach Overhauled in Year 2	N/A	$139,963	$170,037	$175,671	$179,093	$182,561	$186,593	$191,143	Unit cost - provided by Proposer
Coach Overhauled in Year 3	N/A	N/A	$144,162	$175,138	$180,941	$184,465	$188,038	$192,191	Unit cost - provided by Proposer
Coach Overhauled in Year 4	N/A	N/A	N/A	$148,487	$180,392	$186,369	$189,999	$193,679	Unit cost - provided by Proposer
Coach Overhauled in Year 5	N/A	N/A	N/A	N/A	$152,941	$185,804	$191,960	$195,699	Unit cost - provided by Proposer
Coach Overhauled in Year 6	N/A	N/A	N/A	N/A	N/A	$157,530	$191,378	$197,719	Unit cost - provided by Proposer
Coach Overhauled in Year 7	N/A	N/A	N/A	N/A	N/A	N/A	$162,256	$197,119	Unit cost - provided by Proposer
Coach Overhauled in Year 8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	$167,123	Unit cost - provided by Proposer

OVERHAULED COACHES
KAWASAKI 700 (BTC-4, 4A, 4C)

	Annual Unit Cost for Maintaining Overhauled Coaches - by Service Year								
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Note: 700 Series
Coach Overhauled in Year 1	$111,461	$126,838	$131,772	$134,741	$137,761	$141,167	$145,228	$149,876	Unit cost - provided by Proposer
Coach Overhauled in Year 2	N/A	$114,804	$130,643	$135,725	$138,783	$141,894	$145,402	$149,585	Unit cost - provided by Proposer
Coach Overhauled in Year 3	N/A	N/A	$118,248	$134,562	$139,797	$142,946	$146,151	$149,764	Unit cost - provided by Proposer
Coach Overhauled in Year 4	N/A	N/A	N/A	$121,796	$138,599	$143,991	$147,235	$150,535	Unit cost - provided by Proposer
Coach Overhauled in Year 5	N/A	N/A	N/A	N/A	$125,450	$142,757	$148,311	$151,652	Unit cost - provided by Proposer
Coach Overhauled in Year 6	N/A	N/A	N/A	N/A	N/A	$129,213	$147,039	$152,760	Unit cost - provided by Proposer
Coach Overhauled in Year 7	N/A	N/A	N/A	N/A	N/A	N/A	$133,090	$151,451	Unit cost - provided by Proposer
Coach Overhauled in Year 8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	$137,082	Unit cost - provided by Proposer

NOTES:

Cost includes both preventative and corrective maintenance, consistent with Overhaul Maintenance Manuals.
It is anticipated that the unit maintenance costs for the overhauled coaches will be less than that of the existing coaches (prior to overhaul).

Proposer to enter cost data in cells:

Figure 61: MCS for Overhauled Coaches (Annual Unit Cost)

4.C. Best Practices Support

Our innovations, initiatives and best practices for improving the Mechanical function of the MBTA Service are summarized in Figure 4-62 below:

KCS's Best Practices					
Initiative	**Innovative**	**Best Practice**	**Beneficial to MBTA Customers**	**Cost Efficient**	**Support**
Implement new leadership and new management processes (safety first, ISO 9001 standards, etc)		✓	✓	✓	Case studies: SNCF Mechanical shops certification/SNCF staff safety improvement
Implement optimized planning process	✓	✓	✓	✓	Case study: SNCF Fleet Supervision
Implement a sound training program		✓	✓	✓	See Training program (Figure 4-15)
Undertake more maintenance in the South	✓		✓	✓	See Planning (Figure 4-16)
Introduce Lean Management	✓	✓	✓	✓	Case study: Lean Management in SNCF shops
Undertake one-off actions to bring MBTA assets in the right conditions			✓		Case study: Keolis Yarra Tram operations/ + see diagnostics and actions in Figure 4-31/32/33/51/52
Optimize cleaning regimen	✓	✓	✓	✓	Benchmark other American operations (Metro North)
Introduce kitting methodology	✓	✓		✓	Inventory management best practices
Reduce inventory level		✓		✓	Inventory management best practices
Introduce an Engineering team		✓	✓		Case studies: SNCF locomotive BB67300 maintenance improvement
Implement a reliability program		✓	✓		Case study: SNCF AGC DMU reliability growth
Introduce a Driver Advisory System	✓		✓	✓	Knorr Bremse theoretical analysis and commercial offer
Engage a partnership with the MBTA and manufacturers to ensure a successful introduction of the new fleet	✓	✓	✓	✓	Case study: SNCF Francilien introduction

Figure 4-62: Mechanical Services Best Practices

SECTION 5
Engineering Services Plan
Evaluation Factor Information

SECTION 5 — ENGINEERING SERVICES EVALUATION FACTOR INFORMATION

Contents

5. INTRODUCTION 2
I. Executive Summary 2
II. The MBTA's Objectives as We Understand Them 3
III. Our Assessment of the Current Situation 4
IV. The Results We Will Deliver 7
5.A. ENGINEERING SERVICES PLAN 8
5.A.1. Inspecting, Managing, Repairing, Replacing, Maintaining and Reporting on all of the MBTA's Railroad Infrastructure 14
5.A.2. Inspecting, Repairing,and Maintaining Track, Signals, Communications Equipment, Train Control Equipment, Electrical and Railroad Bridges 27
5.A.3. Inspecting, Maintaining, Repairing, and Managing Structures, Buildings, Stations and Platforms 38
5.A.4. Operating the MBTA's Fleet of Non-Revenue Rail Vehicles and Railroad Work Equipment Vehicles 44
5.A.5. Conducting Surveys and Track Design and Construction Inspection 46
5.A.6. Maintaining Freight-Only Track and Unused Rights of Way 47
5.A.7. Integrating New Technologies and Work Practices as Introduced by the Operator or the MBTA 47
5.A.8. Enforcing Third-Party Warranties 47
5.A.9. Maintaining a Comprehensive and Up-To-Date Inventory Control System 48
5.A.10. Completing and Undertaking Supplemental Work Projects, Including Projects in Progress by the Previous Contractors 50
5.A.11. Performing Environmental Services, including the Operation, Maintenance and Service of all Environmental Systems Located Throughout the Service Property 53
5.A.12. Maintenance of All Environmental Permits, Certificates and Licenses 53
5.A.13. Proper Disposal of Any Waste or Hazardous Material 54
5.A.14. All Other Services Related to Compliance with Applicable Environmental Laws and Regulations 56
5.A.15. All Reporting Required by the USDOT, FRA, EPA, MDTE, APTA, FTA and other applicable Laws, Rules and Regulations 62
5.A.16. Providing Information Management, Material Management, Performance Analysis 63
5.A.17. Other Engineering Services 63
5.B. BEST PRACTICES SUPPORT 65

APPENDICES ..... Binder 2
5-1 Rail Grinding and Passenger Comfort
5-2 3D Monitoring of Rock Walls
5-3 GIS and Asset Management
5-4 Improving Lifecycle of Subgrades

5. INTRODUCTION

I. Executive Summary

The Massachusetts Bay Transportation Authority (MBTA) Commuter Rail system is the fifth-busiest commuter rail in the country, after New York (LIRR and MNRR), New Jersey (NJT), and Chicago (METRA) area systems, when measured by weekday customer count.

These customers are carried on 12 lines, split between North and South Station, and cover approximately 413 route miles within Massachusetts, all of which is currently owned by the MBTA. Additionally it operates on 24 route miles in Rhode Island. Along these routes, there are 705 switches, 279 at grade crossing, 190 miles of pole line and approximately 2.5 million ties. There are 295 under-grade bridges, 15 pedestrian bridges and 767 culverts. 134 commuter rail stations service 78 towns and cities directly, including Boston. The commuter rail also serves three stations in Rhode Island-Providence, Warwick/TF Green Airport and Wickford Junction. Additionally, there are three major Mechanical Department shop facilities and eleven layover yard facilities.

Our analysis shows that by importing some Keolis-developed, proven methods, we can greatly improve infrastructure maintenance approach. We will establish a pro-active maintenance program to overcome the deficiencies of the past activities centered on corrective maintenance.

Moving Further Together, we intend to bring to the MBTA world-class processes and methods, supporting sustainable commuter rail system that generates customer excitement and pride within the diverse communities the network serves.

Moving Further Together with us will mean the following for Engineering Services:

Moving Further

- **High performance engineering resulting in higher railroad performance**
  - Improved passenger safety by addressing corridor hazards
  - Improved employee safety by creating a robust safety culture
  - Improved reliability by decreasing track and signal failures
  - Improved availability by decreasing speed restrictions
  - Improved passenger comfort by addressing track geometry issues
- **Comprehensive asset lifecycle and maintenance management**
  - New Maintenance Policy, centered around Life Cycle Maintenance (LCM)
  - Information collection, consolidation and analysis on all types of assets
  - Use of that information to develop short-range, mid-range and long range plans for all support property

Together

- **Enhance technical skills for rank and file through Leadership and Empowerment**
  - Innovative and efficient working methods implementation
  - Enhanced training and technical skills improvements
  - Extensive access to SNCF Infra engineering best practices
- **Sound and transparent relationship with the MBTA**
  - Engaging in a win-win relationship for both maintenance and supplemental works activities management
  - Common actions to address environment issues
  - Developing and fostering together engineering innovations for life cycle improvement and cost efficiency

II. The MBTA's Objectives as We Understand Them

We understand that the MBTA's objectives for the Engineering Department are focused around the following main areas:

The MBTA's Objectives	Our Approach
To identify Proposers that demonstrate an organizational and technical ability to inspect, maintain, repair and install the full range of right of way, bridge, signal and facility assets	We will: • Hire a fully qualified, commuter rail experienced, Chief Engineer; • Provide a team of engineering, quality and performance improvement specialists to concentrate on customizing a lean management approach to the Engineering Services required under this contract • Introduce an Technical Engineering Department designed to be the heart of technical expertise in the Engineering Services Departments • Introduce our Lean Management philosophy that focuses on continual improvement for performance and customer service through proper leadership, management and training • Implement a strong Quality Plan that includes performance monitoring and enhancements at all levels, including environmental management • Develop and implement an overall Engineering Services Plan with annual updates • Ensure that our employees have the training and tools to do their jobs • Ensure that we are in compliance with all Federal Railroad Administration Rules and Regulations
To identify Proposers that have an integrated approach to safety management and hazard reduction	We will: • Implement an Engineering Department Safety Plan, which will be a component of our Safety Plan • Implement a Safety Plan reflecting a total commitment to protect our Right of Way Workers as well as the passengers • Work to achieve employee ownership of their personal safety plan • Develop a safety culture so that our work crews automatically identify and assess potential risk through a behavior-based safety process, adapt their actions accordingly and immediately communicate any concerns to management • Provide both new hire and annual safety training program for all engineering employees • Implement an Engineering Department Hazard Reduction Program based upon our OSCP • Establish quick response teams, depending on the precipitation levels and stream flow values, using automatic alerts to address flood hazard • Commit to immediately address all hazards identified in either the work place or in the customer environment

The MBTA's Objectives	Our Approach
To identify Proposers that have an engineering services approach that preserves and prolongs asset life spans	We will: • Develop and implement a reliability-centered Engineering program that stresses continual improvements in both service reliability and failure elimination • Implement a multi-discipline approach to ensure both cost-effective and long lasting results • Use our Lean Management approach to integrate constant improvement of engineering maintenance methods to achieve continual improvement • Develop advanced planning and better maintenance policies and processes • Establish a Root Cause Analysis mind-set to assessing all issues, problems and failures • Develop and implement an Engineering Services Plan with specific goals and measurable targets, but which also focuses on extending the life cycle of MBTA's assets • Implement Performance-Based Logistics approach to material management • Foster a working relationship with RAILTEC - University of Illinois at Urbana-Champaign, which is one of the best schools in the world for rail research, to work together on prolonging the lifecycle of assets
To ensure that Proposers have a plan to provide cost-effective work scheduling and integration of new technologies	We will: • Use an IT based production planning, controlling and reporting system to track engineering maintenance actions • Apply a Work Order System, which identifies both labor costs and spare parts costs for each maintenance action • Use the data developed from the production planning and work order system to develop asset management and life cycle maintenance extension programs on major Maintenance of Way systems and subsystems • Establish critical Key Performance Indicators (KPIs) to be used to measure and track performance on major systems and sub-systems

III. Our Assessment of the Current Situation

Our Engineering Team and consultants undertook a thorough assessment of the commuter rail property in March, April and May of 2013 (Pre-Proposal Property Condition Assessment). Of necessity, this assessment was limited only to visual inspections of the railroad, its bridges and structures, the communication and signals systems as well as facilities and stations/ platforms. During this Pre-Proposal Inspection, our team was able to visually inspect or observe a portion of the:

- Track Network
- Roadbed Right-of-Way and Subgrade
- Drainage Systems
- Electrical Power Systems
- Signaling System
- Key Telephone Equipment and Communications Services
- Specific Radio Facilities
- Public Address/Electronic Sign System
- Fire Alarm, Security and Closed Circuit Television
- Bridges
- Mechanical Shop and Yards
- Stations and Platforms
- Non-Revenue Vehicles
- Specialty rail maintenance equipment (Tampers, Ballast Regulators, etc.)

Safety and Quality

A comprehensive safety assessment is provided in Section 2 Safety Plan. In general, we would note that the current safety level is not at a level that we feel meets our standards and expectations for the system going forward. We have observed that 12 bridges were in a critical state, the conditions of several road bridges puts trains at risk due to falling concrete blocks, and some facilities, such as the SSSI at Southampton Street, were in a deteriorated condition, thereby putting Mechanical Department employees at risk.

We are aware that the MBTA has expressed concern that the quality assurance and controls functions are currently incomplete or under-utilized (MBTA presentation, January 18, 2012). We believe that a strong focus on safety is intrinsically linked with a strong focus on performing service in a quality manner. Both have roots in pride in the workplace and in the team. We intend to instill that pride in the Engineering Department team, and as result improve both safety and quality.

On-Time Performance

Currently, the Engineering Department is responsible for 10.9% of train delays. This is a statistic that we would intend to reduce by at least 30% within five years. While some lines achieve good engineering performance results, others are clearly under-performing assets. For example, the Newburyport/Rockport line has numerous speed restrictions due to drawbridge conditions, the Fitchburg line incurs delays due to ongoing engineering work, and the Haverhill line sees a disproportionate amount of delays due to signal failure or grade crossing failure.

Every delay, no matter how small, affects On Time Performance. Slow orders or intrinsic delays impact customer satisfaction, customer loyalty and ultimately, ridership.

State of the Assets

In general, our team found that the system has been built, and in general maintained, according to AREMA standards. That is to say the current maintenance meets industry minimums.

Nevertheless, the current infrastructure cannot be considered to represent best practice when compared to other US commuter agencies, or to a more global standard. However, we firmly believe that by combining the existing practices with SNCF Infra maintenance engineering standards and methods that we will be able to improve and optimize the commuter rail infrastructure in order to manage the assets more robustly and efficiently. SNCF Infra is the French railroad engineering company in charge of maintaining all infrastructures on about a 18,600 mile system, on which more than 15,000 trains operate on an average weekday.

Assets	Our Findings
Track & Subgrade Right Of Way	• We identified 16 locations along the right of way which will require rock fall remediation • We observed several areas that are susceptible to flood hazard • Numerous instances of both track geometry and cross level defect, damages on switch points and frogs • Additionally we observed: o More than 9 instances of embankment instability o Instances of standard rail joints unsupported by proper ballast o Numerous instances where the ballast required surfacing o Untreated mud spots in many sections of track o Numerous examples of downed trees and need of vegetation control o Numerous instances of residents and trespassers dumping lawn debris and garbage along the right of way

Assets	Our Findings
Bridges	• There are 50 bridges with a ranking of poor or less and 12 in critical condition • The moveable bridges at Beverly, Manchester by the Sea, and Gloucester are not in a state of good repair and require a condition assessment • Many of the steel bridges have not received a coat of anticorrosion paint; corroded structures exist • Several overhead bridges are putting trains at risk due to spalling concrete and even falling concrete blocks, and require a condition assessment • Hydraulic clearance needs to be re-established • Drainage needs to be cleaned on a regular basis
Communication and Signals	• Interlocking switches: we observed numerous examples of out dated local control panels • Obsolete components • Lack of ladder guards or locking brackets on some signals • Aerial Line cables sagging, frayed and coming out of the spinning wire supporting them on the messenger
Facilities	• One of the Mechanical Maintenance Shops, South Hampton Street, is in a poor state of repair • Improper and lax storage practices at the Cobble Hill Facility • Aging bungalows at the maintenance facilities
Stations	• Mini-highs platforms disassembled or inoperative, stairway access decayed or closed • Insufficient cleaning and litter control in some areas • There are structural issues in and around certain stations

Engineering Department

We found indications that Engineering Services have not received adequate attention over the last several years, and that the network lacks a best-in-class maintenance organization.

We have identified a number of weaknesses in the current organization:

- Little technical engineering support is provided to improve maintenance practices
- The Engineering Department is focused on day-to-day operations, dealing mainly with corrective maintenance without any long term asset management approach
- Maintenance planning is weak and disconnected from Transportation
- Cobble Hill housekeeping is insufficient and creates safety and quality concerns
- Maintenance Management System (MMS) is not being used to its highest potential

CASE STUDY

SNCF Infra French railways have won international recognition for levels of performance that are among the highest in the world. They owe this in no small part to the technical expertise and outstanding capacity for innovation of SNCF Infra, and our proven ability to manage operations effectively in a complex, integrated environment.

For decades we have harnessed unique know-how to address tasks ranging from the operation and maintenance of high-speed and commuter rail lines to the planning and implementation of new projects, deployment of innovative systems and engineering of multimodal transport interfaces in and around cities.

CASE STUDY, continued

SNCF Infra will be closely committed to Keolis Commuter Services in order to provide them with full maintenance engineering improvement support, for the sake of a safe, reliable and efficient network operation on the MBTA Commuter Rail System."

— Pierre Izard,
Chief Executive Officer, SNCF INFRA

IV. The Results We Will Deliver

High Performance Engineering Resulting in Higher Railroad Performance

SAFETY	• 20% reduction in our employee on-duty injury cases • 10% reduction of lost work days per 200k hours by 2017; • 30% reduction in our employee lost time days • Significant reduction of train operations safety-related incidents related to Engineering Services in the first six months of operations • 10% reduction safety related incidents charged to the Engineering Department reduced by 2017
RELIABILITY	• Passenger Train delays charged to Engineering Services will be reduced by 30% after 5 years • 5% reduction in signal caused train delays
AVAILABILITY	• Disruptions to commuter rail services due to maintenance and construction cut by 50% after 5 years
PASSENGER COMFORT	• Track Geometry: Exception peaks reduced by 40% after 5 years
COST EFFICIENCY	• Non-revenue Vehicle Fleet Efficiency Management including downsizing by 15% and fuel expenses reduction by 8%

Comprehensive Asset Lifecycle and Maintenance Management

ASSET MANAGEMENT	• Implement an Asset Management Program for all elements of the Asset Register which will bring them into a state of good repair
MAINTENANCE MANAGEMENT	• Implementation of a new maintenance policy, fostering condition-based maintenance rules

Enhance technical skills for rank and file through Leadership and Empowerment	
ENHANCED TRAINING AND TECHNICAL SKILLS IMPROVEMENTS	• Implementation of a Technical Engineering Department • Best Practices sharing sessions for both the Technical Engineering Group Deputy Chief and the Lean Management Engineer on the French network • "Back to the Basics": Safety, Technical and Performance training on field
LEAN MANAGEMENT IMPLEMENTATION	• Lean Management Policy implementation • Tie job production increase by 40% after 5 years • CWR replacement production increase by 10% after 2 years
EXTENSIVE ACCESS TO SNCF INFRA ENGINEERING BEST PRACTICES AND KNOW-HOW	• Maintenance Engineering and Lean Management knowledge transfer • Full commitment of SNCF Infra and Systra USA in the Asset Management and technical audits

A sound and transparent relationship with the MBTA	
MAINTENANCE ACTIVITIES MANAGEMENT	• Our Engineering Services Plan Annual Updates will lay our thorough approach to managing all aspects of our maintenance plan
SUPPLEMENTAL WORKS ACTIVITIES MANAGEMENT	• Our Engineering Services Plan Annual Updates will lay out all Supplemental Work along with Force Account Budgets and calendar schedules
ENVIRONMENTAL IMPROVEMENT	• All environmental systems and sub-systems will be fully functional and maintained to OEM standards
ENGINEERING INNOVATIONS FOR LIFE CYCLE IMPROVEMENT AND COST EFFICIENCY	• Options to be further discussed • Asset Management audit delivered by SNCF Infra to the MBTA after 4 months of operation, including long term Investment and Maintenance Policy prescriptions

5.A. ENGINEERING SERVICES PLAN

General Approach

Our Engineering Services Plan, which is laid out in more detail by department and function in the remainder of this document, is driven by our vision for the Engineering Department. Our vision is to transform the Engineering department to a world-class organization which utilizes proven methodologies to provide a safe, reliable and efficient infrastructure to support the operation of the commuter service. The approach described in the plan is based on the ISO 9001:2008 process and utilization of certain proven tools to provide a platform that will support the transformation.

This Plan discusses the ISO process and the key management tools we intend to employ. It also briefly describes our proposed organizational structure and the Key Performance Indicators (KPIs) that we will use to determine success in implementing the Engineering Services Plan. More detailed discussion of our plan, broken down by department, is found in Section 5.A.1. The required elements of our plan are addressed in Sections 5.A.1. through 5.A.17.

ISO 9001 Process Approach

We will build a state of the art industrial organization to fulfill and go beyond MBTA requirements, relying on ISO 9001 processes. ISO 9001 is a programmatic set of generic standards designed to help organizations implement

Quality Management. Quality Management can be summarized as:

- What the organization does to ensure that its services satisfy the customer's quality requirements
- What the organization does to comply with any regulation applicable to those services
- What the organization does to enhance customer satisfaction
- What the organization does to achieve continual improvement of its performance

The output of an ISO 9001 process is a disciplined Management System by which the organization manages its processes. To be really efficient and effective, the organization manages its way of doing things by systemizing it, down to the most finite detail. That way, everyone is clear about who is responsible for doing what, when, how, why and where.

The focus on ISO standards introduces an organization to a host of tools and practices developed by other firms to meet these exacting standards. At SNCF we have diligently evaluated those tools and identified those that best apply to the rail industry. Then we have incorporated those elements into our Quality Management program. Rather than try to explain a large concept like Quality, we point out specific programs that we will undertake as part of the overall ISO 9002 program, and specific initiatives or programs that will be discussed in more detail in Section 5.A.1. Some of those subordinate programs that we will introduce within this context are Process Analysis and Documentation, Reliability Centered Maintenance, Lean Management, Quality Assurance, Change Management and Interface Management.

Reliability Centered Maintenance

Understanding and documenting processes as part of an ISO initiative is not an end in itself. It is a means to an end, and a key input to our goal to develop a Reliability Centered Management program at MBTA commuter rail. We believe that a programmatic approach to maintenance and capital programs will provide a much more robust infrastructure than a reactionary, "run to failure" mode. The Reliability Maintenance Management program is also referred to as Lifecycle Management, and is centered on an Engineering Plan that is designed to replace elements and modules on a systemic and programmatic basis in order to maximize the life of the asset. An example of this is an enhanced rail grinding program. Implementation of such a program on SNCF resulted in a significant reduction in the number of rails requiring replacement. The specifics of this program are discussed in Section 5.A.2 of this proposal.

Lean Management

Lean is the set of "tools" that assist in the identification and steady elimination of waste. As waste is eliminated quality improves while production time and cost are reduced. A second approach to Lean Manufacturing, which is promoted by Toyota, in which the focus is upon improving the "flow" or smoothness of work, thereby steadily eliminating unevenness through the system and not upon 'waste reduction' per se. The difference between these two approaches is not the goal itself, but rather the prime approach to achieving it. The implementation of smooth flow exposes quality problems that already existed, and thus waste reduction naturally happens as a consequence. The advantage of this approach is that it naturally takes a system-wide perspective.

Obviously, the process assessment and the reliability, or lifecycle, approach provide direct inputs to the Lean Management process, To the extent that the work and the processes can become programmed and reduce unplanned reactionary activities, the safety and reliability of the entire system can be enhanced. As an important sidelight, SNCF has found (and this is confirmed by the hundreds of companies that rely on these tools to improve their operations) there is significant cost savings that result from these efforts.

Quality Assurance

Quality Assurance and Quality Control are terms that are used regularly in the business world. While the general concept of wanting a higher quality product or service is well understood and accepted as a good thing, the organizational discipline required to regularly and consistently provide quality is often ignored. On other properties on which we have applied this suite of programs, we have been able to achieve a significant improvement in the services we provide.

Based on our SNCF Infra experience, we will implement a tailor-made, ISO 9001-compliant continual improvement quality process, for the MBTA Service Engineering Services, as shown on the following diagram:

CASE STUDY: SNCF's APPROACH TO QUALITY

SNCF is a leader in implementing safety, quality and environment systems and following best practices for continued improvement.

SNCF has been implementing ISO 9000 compliant Quality Management Systems within its infrastructure maintenance departments, amongst which more than 60% are ISO 9001 registered, though such certification is not required by Réseau Ferré de France, its main customer. SNCF Engineering branch and SYSTRA are also ISO 9001:2008 registered.

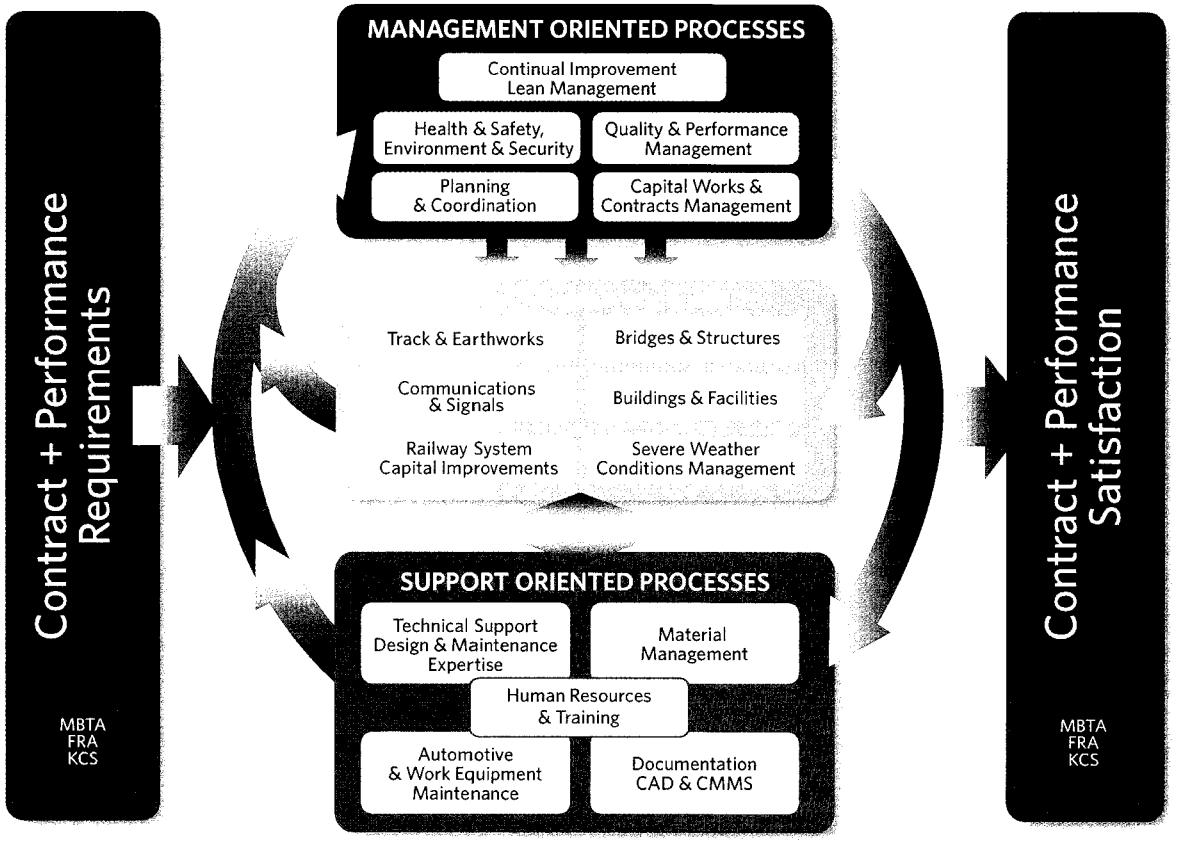


Figure 5-1: MOW Process Chart

Through these processes, we will highlight deficiencies, manage the costs, and ensure continual improvement throughout our organization. The Chief Engineer will be accountable for deploying this new organization, pursuant to the schedule in Figure 5-2.

Change Management

All of the programs cited will require a change in approach and a willingness on the part of the employees to embrace that change. Change does not come easily in any industry, and can be especially difficult in an industry as old as railroading. Therefore it is important to manage that change proactively. We have found that enlisting trusted associates in the implementation of change greatly increases the "buy in" by the rank and file employees. Therefore we intend to work closely with front line supervisors and local union representatives to make sure they understand the goals and processes that we are implementing to meet those goals.

Interface Management

As noted above, every process or activity on a railroad is related to other processes or activities. This goes far beyond simply follow-on tasks within a department. The activities of a production gang, for example, can quickly impact customers, the public, Operations, Safety, Mechanical, Customer Service, Procurement and Material Management, Community Relations, Finance (A/R and A/P), the MBTA, and other public entities. Not only is it important to have a plan to manage change within the organization, but you must be aware of the impacts of actions within the organization on other departments and on people and entities outside the company. We are committed to improve our processes and one process that we must improve along with the work processes is the communication process.

We intend to manage that interface process in order to both reduce missed communications and lost opportunities for efficiencies within the company, but also to improve our standing as a good corporate citizen.

Our Organization

Figures 5.3 and 5.4 on the following pages depict the Engineering Department organization chart.

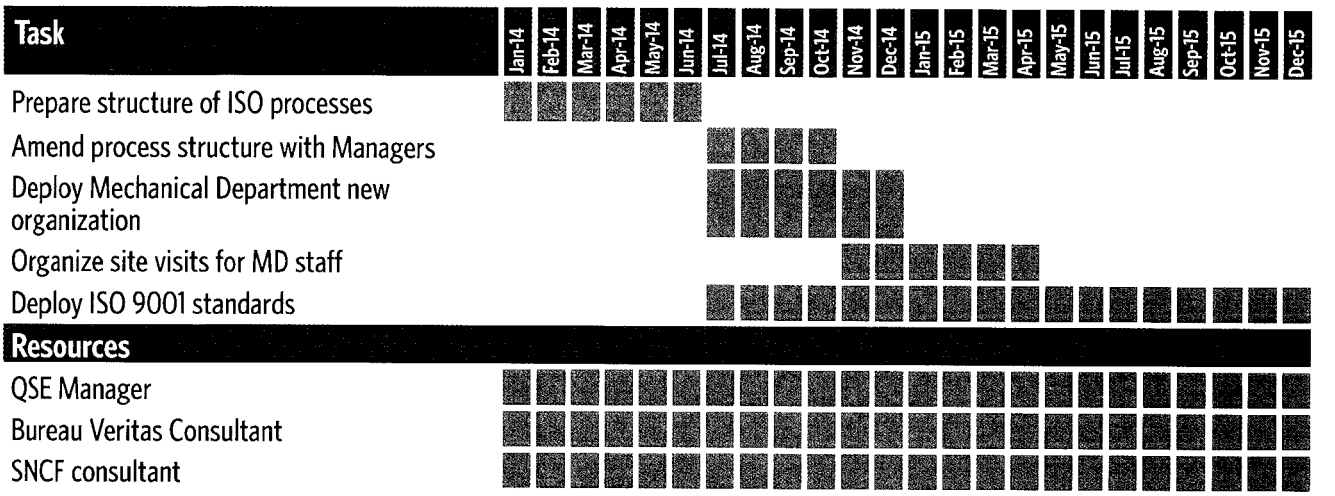
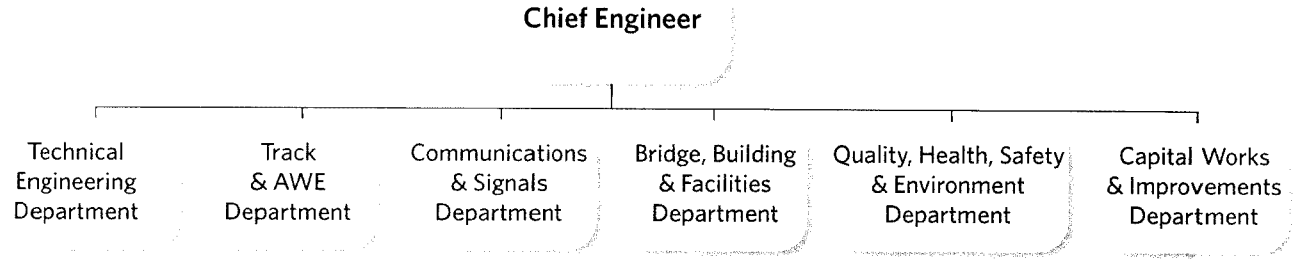


Figure 5-2: Task Schedule


Chief Engineer
Technical Engineering Department
Track & AWE Department
Communications & Signals Department
Bridge, Building & Facilities Department
Quality, Health, Safety & Environment Department
Capital Works & Improvements Department

Bridges, Building & Facilities Department

- Bridges Inspection
- Bridges Maintenance
- Fencing and guard rails maintenance and replacements
- Drawbridges operators
- Buildings Inspections
- Buildings Maintenance
- Electrical maintenance
- Environmental Systems Operation and Maintenance

Capital Works and Improvements Department

- Capital / Supplemental Works management
  - *Planning*
  - *Resources management (workforce + equipment)*
  - *Contract management*
- Other MBTA contractors, public agencies and communities cooperation management

Quality, Health, Safety and Environment Department

- Quality, Health, Safety & Environment Policy definition for Engineering Services
- Quality, Health, Safety & Environment Policy enforcement for Engineering Services
- Quality System Audits
- Health & Safety Audits
- Environmental Systems Operation and Maintenance Audits
- Analysis of critical developments and suggestions for improvements to any of the Q, H, S ,E issues
- Circulation and update of relevant documentation

Technical Engineering Division

- Maintenance engineering
- Multi-annual production planning
- Technical Support
- Reporting and submittals to the MBTA and other public agencies

Track & AWE Division

- Emergency response management
- Track Inspection (incl. hi-rail inspections, US etc.)
- Track Maintenance (incl. rail surfacing, grinding, rail and tie replacement, frogs & switches, welding, platforms etc.)
- Drainages Maintenance & Reshaping
- Grade crossings Watchmen provision
- Grade crossings improvement
- Radio room
- Material Management
- Automotive and Work Equipment Maintenance

Communication & Signaling Department

- Emergency response management
- C&S Inspection
- C&S Maintenance (incl. Maintenance Operations Control Office, signals, signs, communications systems and radio)
- C&S Construction
- Systemwide design of signals
- Grade crossings event recorder program
- Replacements (pole line, switch machines etc.)
- Computer Dispatching System
- Signal Repair shop Management
- Material Management
- Wind Turbines O&M subcontract supervision

Figure 5-3: Departments and responsibilities within the Engineering Department

The organization chart below (Figure 5-4) further lays out the teams that will be in place under each of these direct reports:

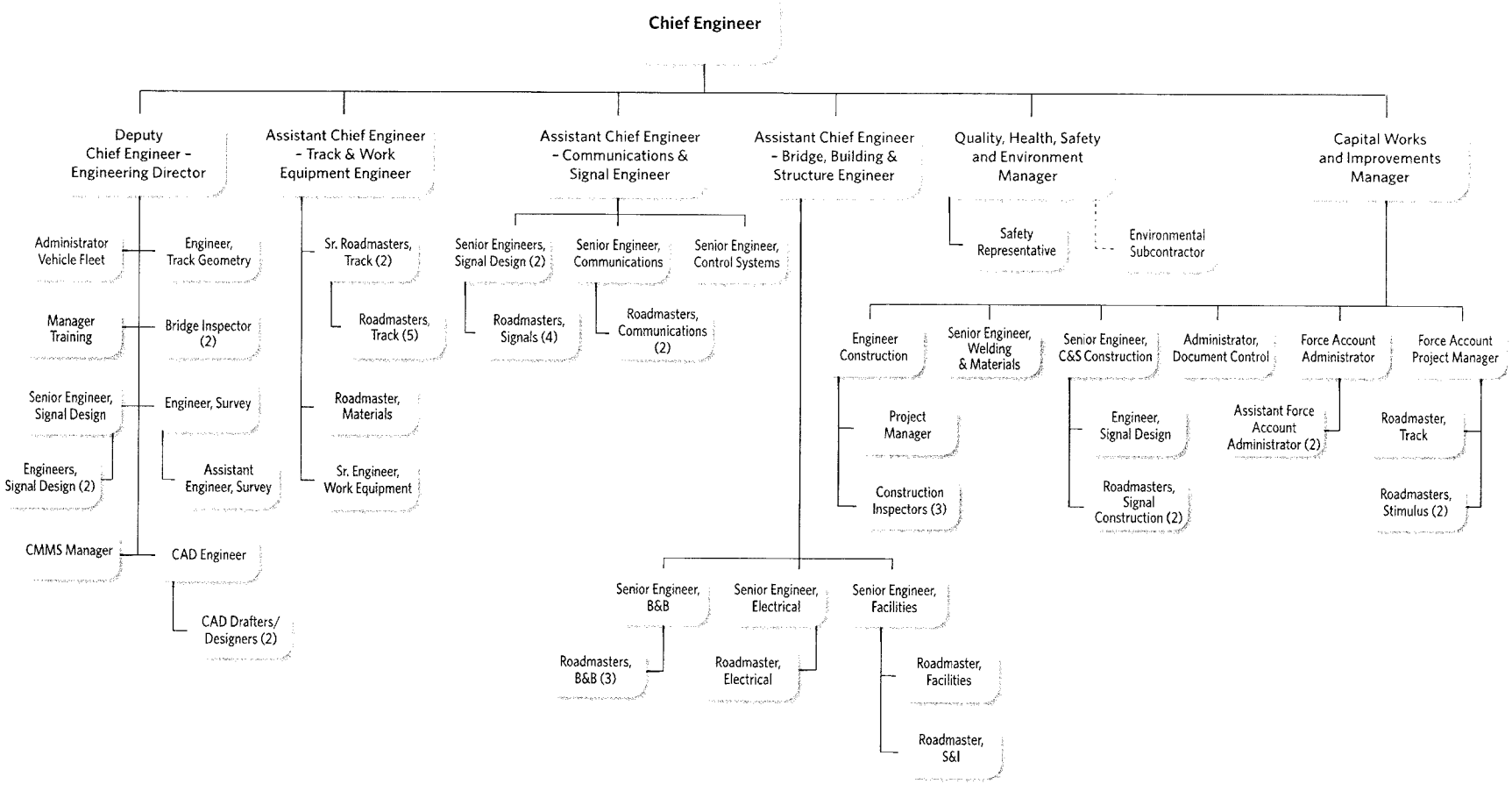


Figure 5-4: Our Organization chart

5.A.1. Inspecting, Managing, Repairing, Replacing, Maintaining and Reporting on all of the MBTA's Railroad Infrastructure

The inspection, repairs, replacements, maintenance and reporting management policy will be undertaken by the Technical Engineering Group and presented in the Annual Engineering Services Plan.

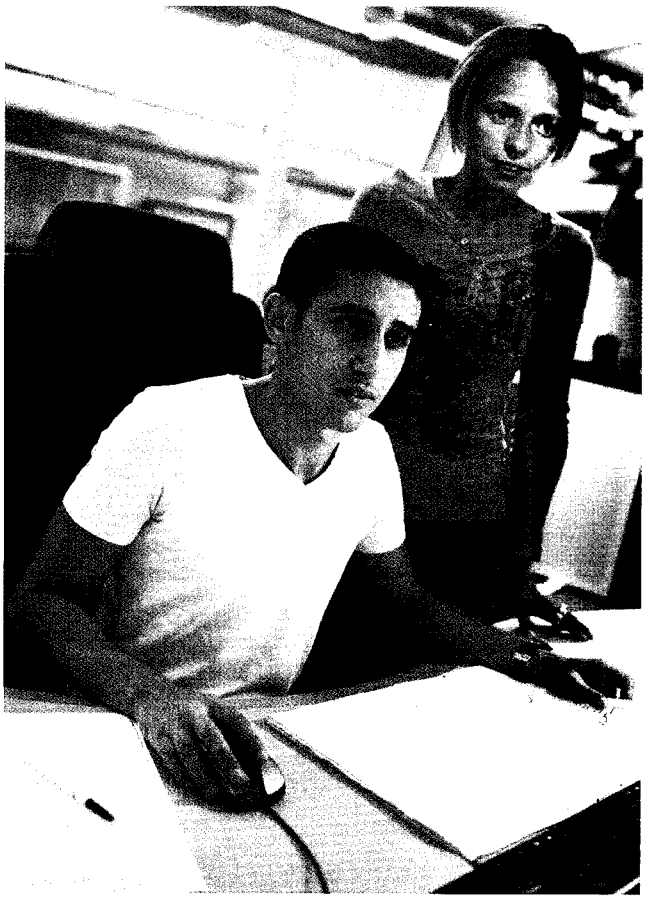
Moving Further Together, we will develop innovative, efficient and cost-effective policies for:

- **A High performance engineering resulting in higher railroad performance**
- **A Comprehensive Asset Lifecycle and Maintenance Management**
- **Enhanced technical skills for rank and file through Leadership and Empowerment**
- **A Sound and Transparent Relationship with the MBTA**

A High Performance Engineering Resulting in Higher Railroad Performance: A Quality Program for Performance-Oriented Management

Moving Further Together, we intend to build an embedded Engineering Services management system, driven by performance in terms of Safety, Reliability and Availability.

Our Quality Assurance Program (QAP) will be the primary integrated management process to provide quality assurance, guide the continuous development of the organization and deliver continual improvement in accordance with the requirements of ISO 9001:2008. The Engineering Services Plan will be developed in accordance with the QAP and will follow the Plan, Develop, Measure, and Improve (PDMI) process. One Quality Assurance Representative (QAR) will be in charge of quality and performance management as it pertains to engineering services and will report to the Director - Quality and Environmental Services.



Plan

The annual Engineering Services Plan is the major input to our maintenance and performance activity.

It will be used to determine maintenance and work activities in terms of scope, applicable rules and policy, frequency, duration, resources and staff required to complete the performance targets and associated missions.

The Annual Engineering Services Plan will be designed and shared with the Transportation, Mechanical and Customer Service Departments in order to ensure their needs are properly addressed. The Plan will be adjusted as necessary to ensure that the required tasks are achieved according to our contract with the MBTA, the customers' needs, the circumstances and the MBTA approval. This may require changes to the staff numbers, their shift patterns or the available

facilities and equipment, while ensuring that such changes are achieved in a cost-effective manner.

Develop

Task orders will be generated electronically for our maintenance staff and will be called into the subcontractors. Completed work tasks including detailed fault categorization, repair or servicing actions and resources used including labor, spare parts and fuel, will be recorded and uploaded automatically into the Maintenance Management Information System (MMIS).

Measure

The following KPIs will be reviewed daily. Weekly and Monthly production reports will be generated for review at the weekly and the General Manager's Monthly meetings.

Our measurement will concentrate on identifying safety issues, main fault categories that cause delays to the service and works completion. Our maintenance team will prioritize their efforts on the causes of delays that have the greatest impact on the passengers.

Improve

We will propose initiatives to reduce faults that have the greatest impact on the passengers. These initiatives could be identified daily if the implementation of the initiative is within the delegation of the staff involved, and there is the potential to make an immediate impact on the service. Alternately, if there are greater resources required, increased planning complexity or time required to implement an initiative, the issue may be escalated to the weekly meeting.

Our organization will be based on such a Maintenance Engineering continual improvement process. The Technical Engineering Department will be the heart of technical expertise, providing 100% support to the Field, and assuming the interface with the MBTA Engineering Department. SNCF Infra experts will provide Maintenance Engineering expertise and annual technical audits in order to empower the local experts. Our partners from HNTB Corporation and SYSTRA USA will join us in the Design Engineering team.

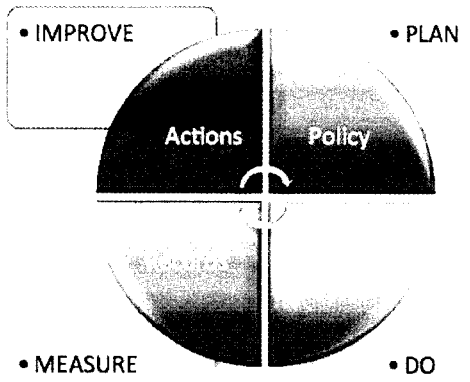
CASE STUDY: Maintenance Engineering and Continual Improvement at SNCF Infra Concept

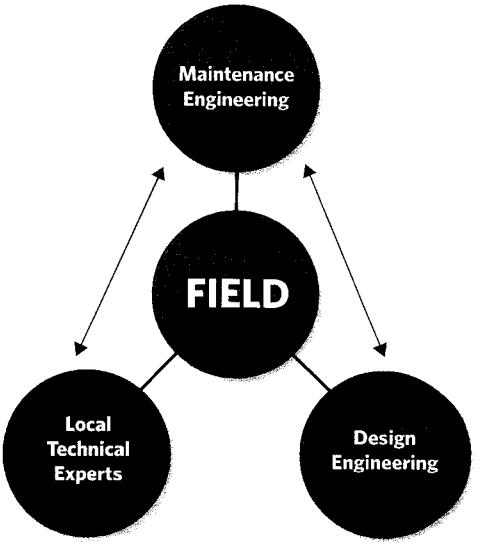
Maintenance engineering is a typical illustration for Continual Improvement and Performance-Oriented Management. It is the application of techniques, engineering skills, feedback and lessons learned, organized in such a way as to ensure that the design, development and operating rules of equipment provide optimal performance at the best cost.

A Virtuous Cycle

- FIELD is "where things happen"
- Technical Engineering Department Experts provide full support to the Field
- Fully dedicated high level and experienced maintenance engineering team analyze and forecast the maintenance and replacements needs
- Design Engineering develop improved prescriptions and measuring tools for both Maintenance Engineering and Technical Department Experts, for Field support
- Each entity feeding the other and all sharing the lessons learned in order to:
  - Improve the railway system performance in terms or RAMS+E
  - Prepare the future projects
  - Manage efficiently and prolong the life cycle of the assets

CASE STUDY: Maintenance Engineering and Continual Improvement at SNCF Infra Concept





Quality, Health, Safety and Environment (QHSE) Department

The Quality, Health, Safety Environment Department Manager is responsible, on behalf of the Chief Engineer, for following our Quality, Health, Safety and Environment Policy for:

- Communicating to the Engineering Services Department the importance of meeting customer and employee satisfaction as well as Quality, Health, Safety and Environment statutory and regulatory requirements
- Establishing, implementing and enforcing Quality, Health, Safety & Environment Policy for the Engineering Services Department, in compliance with our QHSE policy
- Ensuring that QHSE objectives are established
- Supervising, performing and analyzing QHSE system and operational audits
- Analyzing critical developments and suggestions for improvements to any of the QHSE issues
- Conducting Management reviews
- Managing the safety of the technical processes and that of staff. In this connection, assistants will be brought into action to evaluate the application of safety policy and conduct annual action plans in order to contribute to ongoing improvement in the Engineering Services structures. The Department will also monitor the clearance status of the different employees in relation to each particular profession
- Masterminding the Engineering Services QHSE part of the Joint Performance Improvement Program to ensure annual progression in areas agreed as part of our QHSE policy
- Tracking documentation, being responsible for circulating and updating literature pertaining to all fields (technical, safety, administration), and
- Storing, securing and providing any QHSE historical data and action records

Safety First

The Engineering Department Safety Plans are a sub-set of our Operator Safety Compliance Plan in Section 2. As discussed previously, the safety level is not up to expectations. Therefore, safety will be the primary element in everything

that we do. Our managers and supervisors will be empowered to create and maintain a safe working environment for all Engineering Department activities. They will also be held actively responsible for achieving performance improvements in the safety area, and they will be measured by specific objectives.

To improve safety and quality from day one of operations, five objectives will be set and monitored by each manager:

- All department members must wear their safety personal protective equipment (PPE) at all times
- Each Engineering Department shift will commence with a daily safety briefing led by the foreman
- A specific Job Safety Briefing will be conducted by work-group supervisors before any group work task can be performed
- Ensure rigorous compliance with our Roadway Worker Protection Program
- Investigate and prepare an investigation report for each injury reported by an employee

These actions will be monitored on a weekly basis. The Chief Engineer will control these actions through spot checks in the workshops. Moreover, managers will be asked to commit to spend one full day per quarter in the field. In addition, we expect that our managers will review each employee injury report and they will ensure that a root-cause analysis has been completed to truly identify the cause of the accident in order that we can eliminate potential sources of injuries.

Moreover, the QHSE Manager will set up an annual safety and quality internal audit plan to check that all safety requirements are maintained at all times within the Engineering Department. Each-year, the internal audit plan will cover the whole scope of the Engineering Department. These audits will be carried out by senior management internal staff. Having had experience as an auditor will increase their commitment to promote safety and quality within their own perimeter. All audit recommendations will be implemented and their efficiency reviewed by the process leader as part of the monthly process review.

Moving Further Together, these actions will deliver a:

- 20% reduction in our employee on-duty injury cases
- 20% reduction in our injured employee on-duty rate per 200,000 hours
- 30% reduction in our employee lost time days
- Significant reduction of train accidents (derailments etc.) related to the Engineering Services Department in the first 6 months of the Operations
- 10% reduction of safety-related incidents charged to the Engineering Services Department by 2017

Performance Management

The Technical Engineering Department will be in charge of Performance Management. It will follow-up, consolidate the KPIs and develop the Joint Performance Improvement Plan (JPIP), which will gather portfolios of improvement actions for each of the Performance topics.

It will contribute to maintaining the performance level of the Service Property to allow Transportation Services to be provided at speeds no less than the Maximum Authorized Speeds, based on the maintenance class of track.

The temporary speed restrictions that are in existence on the Commencement Date will be listed during the Joint Audit. A remedial plan will be proposed by the Engineering Department and discussed with the MBTA, no later than 120 days after Notice To Proceed (NTP), in order

to remove the temporary speed restrictions as quickly as practical. This schedule will be part of the required initial Engineering Services Plan (ESP). Any further speed restriction will be subject to a remedial schedule to be approved by the MBTA.

A Comprehensive Asset Lifecycle and Maintenance Management: A New Maintenance Policy, Fully Dedicated to Prolong Assets Life

Our task is to maintain and improve safety, route capacities, in terms of speed and throughput, at the lowest possible cost, and scheduling any necessary investment at the most appropriate moment during the life cycle of the network. In the interest of maintaining railway property assets, there are a number of basic guiding principles that we will apply when making choices. Work done on the various Railway Infrastructure components must ensure the most effective and longest lasting result.

The nature of a railroad system is such that more restrictive measures are necessary to maintain very high safety and regularity standards:

- We will take immediate action in order to respond to identified defects
- Our Maintenance Policy consists of agreeing basic parameters (methods, program, budget, etc.), in relation to targets and objectives set by the MBTA under the Agreement. In order to optimize production costs, maintain safety levels for people and property, these parameters will, depending on the policy selected, give priority to:
  - The life cycle of the equipment
  - Its Reliability
  - Its Availability
  - Its Quality of service
  - Protection of the environment

Our Maintenance Policy requires choices to be made from among the following:

- Preventive and/or corrective, systematic or condition-based maintenance
- Sub-contracting or own resources
- Partial replacement of components or continued maintenance
- Scheduling the distribution of resources available for inspections and repairs

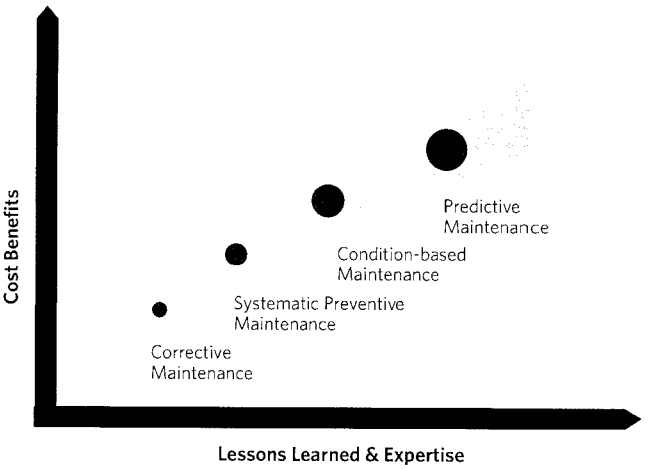


Figure 5-6: Maintenance Policy

Figure 5-6 shows the effect of leverage that can be obtained by capitalizing on experience and moving from corrective maintenance or traditional systematic maintenance to a condition-based and predictive policy. Our intention is to use that effect of leverage as a major input for maintenance enhancement and cost benefits.

We will, jointly with the MBTA, develop a structured approach of:

- The knowledge and the management of life cycles
- The global long term costs (deterioration laws)
- The economic risk value assessment

We will work together on the reduction of costs by optimization of the maintenance/renewal ratio, which is the major issue for infrastructure asset managers.

Maintenance will be performed in accordance with manufacturer's OEM standards, recommended practices and applicable State and Federal codes, laws and regulations. We will fully comply with manufacturer's warranty and cooperate with the MBTA regarding the fulfillment of any warranty obligation and the provision of any relevant

information about such warranties. We will use the 3rd party warranty administration procedures detailed in the Material Management and Purchasing section of the management plan.

CASE STUDY: Yarra Trams Infrastructure Asset Strategy (Melbourne - Australia)

In 2009, Keolis took over Melbourne Yarra Trams operations from Transdev. The network is made of 155 miles of double track, with 1,763 tram stops on 29 tram routes. When taking over operations, Keolis realized that the Asset Management Plan was not designed to face Yarra Trams challenges, therefore jeopardizing asset life integrity. Many works included in the existing Asset Management Plan were indeed either not required to the planned extent, unclear in scope, and/or not meeting actual needs.

To optimize this situation, Keolis developed a Track Asset Improvement Strategy which was reviewed and validated in 2011 by other respected asset owners around the world, including SNCF. In this strategic plan, Keolis proved to be interested in improving the long term integrity of the infrastructure asset base beyond the contract period by realigning the infrastructure Maintenance & Renewal program to the actual needs of the network. Melbourne Transport Authority recognized Keolis as a competent asset manager and accepted these recommendations; then both parties worked together to refine recommendations within the existing political and funding constraints.

While developing this strategic plan, Keolis focused on:

- Establishing the current condition of the infrastructure base, assigning operational, safety, and commercial criticalities, and on that basis, prioritizing the Maintenance and Renewal program to best meet the future needs of the network;
- Gaining close involvement and agreement with Transport Authority on the methodology, the expectations and the outcome of the revision throughout the development of the program; and
- Ensuring a continuous understanding of Transport Authority's drivers, constraints and need to provide clear, auditable trail of migrating from the old Asset Management Plan to the new.

The successful partnership between Keolis and the Transport Authority delivered the following benefits:

- An asset management strategy that is far better aligned with the future needs of the network, as well as the business, providing the most optimum value for money;
- Future-proofing funding built in to the Asset Management Program to cater for segregation and accessibility;
- Enhanced technical standards and enhanced safety;
- Innovative track renewal and rehabilitation methodologies that will enable significant increase in the improvement of track condition over the franchise; and
- Changes to the asset renewal strategies that will enable further significant savings to be made from maintenance budgets.

All in all, the new Asset Management Plan delivers tremendous asset improvements at no additional cost for the Authority.

Enhance technical skills for rank and file through Leadership and Empowerment

The Technical Engineering Department: Our Technical Arm

The Technical Engineering Department is the heart of technical expertise in the Engineering Services Organization. It will be managed by the Engineering Director, who will also serve as the deputy Chief Engineer of the Engineering Department.

Dealing with maintenance engineering, planning, technical and inspection support and reporting, this entity will be the preferred contact for the MBTA Engineering and Maintenance Department.

Maintenance engineering encompasses but is not limited to the following activities:

- Track expertise (geometry, defects) and records analysis
- C&S expertise (inspections) and records analysis
- Earthworks & Bridges expertise (inspections) and records analysis

Maintenance planning includes the following:

- Engineering Services Plan
- Tests, inspections and preventive maintenance activities planning
- Incorporation of maintenance operations in the train schedules
- Resources availability management (incl. workforce, non-revenue vehicles and equipment)

Technical Support:

- Performance and Production Management
- Engineering Services part of the Joint Performance Improvement Program (JPIP) (including e.g. Signal failure reduction program etc.)
- Design engineering and CAD engineering
- Computerized Maintenance Management System
- Technical audit
- Incident Management and Notification
- Warranties administration and claim data management on behalf of the MBTA
- Training supervision
- Technical Documentation Management, incl. circulation and update

The Technical Engineering Department will be in charge of providing engineering, including survey and plans, to control encroachments on the Rights of Way. All engineering and survey work will be saved in the Commuter Rail IT Environment no later than 30 days after the work is completed. No construction or modification to any facility that reduces existing clearance dimensions at any location along the Right of Way will be permitted without the prior written approval of the MBTA.

The Technical Engineering Department will also be in charge of Communications & Signals (C&S) expertise, and will help, in cooperation with the C&S Department, in preparing and providing the Authority with all necessary documents and will file all necessary applications for authorization to the FRA, Federal Communications Commission and/or Mass DPU for new installations, modifications or removals of signal or communications systems.

Inspections:

- Track geometry car inspection will be performed once every three months by the Track Geometry Engineer, in relation with the line's Track Engineer or Roadmaster
- The Technical Engineering Department experts will participate in special inspection of track and right of way during and immediately after severe weather conditions and submit a report of observed conditions that could affect track and railroad operations and identify corrective actions required
- Supervision of additional tests on rails if required in our opinion, the MBTA's or that of a regulatory agency having competent jurisdiction
- Assistance in any kind of inspection if required by the Production Departments, MBTA, or a regulatory agency having competent jurisdiction

- Reports detailing results of rail testing and corrective actions made within two weeks of testing and corrective measures employed

The results of all inspections, recorded by Technical or Production Departments on the prescribed forms, including digital photographs as appropriate, and signed by inspector(s), will be analyzed by technical experts and submitted to the appropriate agency(s) with a summary report of all inspections submitted monthly to the MBTA. The Commuter Rail IT Environment element regarding these inspections will be updated to reflect the fact that the inspections occurred and detail any conditions found during the inspections.

Reporting and submittals to the MBTA and other public agencies:

- Storage, security and provision of any Inspection & Maintenance historical data as well as action records
- Organization and supervision of the input of five years of historical data into the Commuter Rail IT Environment
- Consolidation and provision of ODRL's

The Technical Engineering Department will also be responsible to maintain our membership in the AAR, AREMA, the IEEE, and the Massachusetts Railroad Association, in the name of the MBTA, and participate their meetings and committees.

The Engineering Services Plan

We will provide a comprehensive approach to all aspects of infrastructure maintenance services in our Engineering Service Plan (ESP) that will ensure our compliance with all aspects of the RFP. Our Engineering Services Plan will incorporate all of the technical requirements and specifications of the RFP and all of the operator deliverable requirements list. The annual updates to the ESP will afford details about the day-to-day inspection, production and maintenance activities required to maintain each asset in a state of good repair for the right-of-way, track, signals and communications, stations and facilities, bridges, culverts. We will insure that no known unsafe condition is left unattended at any time, irrespective of who has ultimate responsibility for rectifying the condition. In addition, we will ensure that all trash, debris and graffiti are removed in a timely manner. Finally, we will remain in total compliance with all Federal and State inspection, reporting and document retention requirements.

The Chief Engineer will be responsible for establishing, preparing and implementing upon approval from the MBTA the annual ESP. This document will be issued in cooperation with all the maintenance Departments and driven by Agreement terms and requirements, MBTA expectations and Joint Performance Improvement Plan targets.

The ESP is derived from information contained in the Maintenance Manuals provided by system suppliers, Applicable Law and Engineering Services Standards, as well as requirements included in the Agreement. The plan will outline the preventive maintenance activities proposed for each asset type, giving maximum maintenance intervals for assets in general locations as applicable.

The Plan is a live document and will be amended with experience and particularly if incidents and failure investigations indicate changes are necessary. Our first ESP (ODRL 3.2-001) will be issued, as required, 90 days after NTP.

Our ESP will also integrate the MBTA's required elements into a single comprehensive approach to overall maintenance for assets under the control of the Technical Engineering Department.

The ESP will be specifically based on the following "Engineering Services Standards":

- Maintenance of Way-1
- Communications and Signals-1
- Station and Facility Design Standards
- Book of Standard Plans
- Electrical Department Procedures Manual
- NETA 2001 Maintenance Testing Specifications
- Material Standards
- Policies and Procedures (Track Buckling, Rail Grinding, Field Welding)

- Rail Industry Standards to include: AREMA, AAR, AREA, Etc.
- FRA Track Safety Standards

It will also focus on all required and recommended maintenance standards from the original equipment suppliers, as well as all applicable State and Federal rules, regulations, and laws. Our Technical Engineering Department will be responsible for the organization of technical audits in order to check and assess that Engineering Services are provided in compliance with all those requirements. In addition, the Engineering Service Plan will detail the following:

- Inspection and Maintenance Activities
- Engineering performance Standards
- Frequency of tasks
- Staff Plans
- Specific Work Schedules
- Schedule of values for various maintenance operations
- Proposed work schedules
- Proposed annual track outage and service disruptions
- Flagging requirements

The ESP will include (but is not limited to) the components listed in the Agreement (Sch. 3.2 - 2.2.5). It will be quarterly updated as requested. In addition the ESP will be in accord with the requirements of the RFP and the complete list of Operator Deliverable Requirements List (ODRL).

Maintenance of Way Organization and Planning

The Technical Engineering Department is in charge of proposing MOW organization and planning optimization as well as replacement programs in connection with the Production Departments. The track geometry engineer will propose the annual rail grinding program to be included in the ESP in the amount of $500,000 per Agreement Year, as a corrective or condition-based preventive maintenance action. This program will be discussed with the Track Department and will be subject to MBTA's approval.

The track geometry engineer will propose the annual rail replacement program to be included in the ESP within the limit of 5 track miles of CWR, including OTM, per Agreement Year, as a corrective or condition-based preventive maintenance action. This program, including proposed replacement rails storage locations, will be discussed with the Track Department and will be subject to MBTA's approval.

The track geometry engineer will propose the annual crossties replacement program to be included in the ESP within the limit of 40,000 new crossties, per Agreement Year, as a corrective or condition-based preventive maintenance action. This program will pursue the program provided by the MBTA for the first six months of the first Agreement Year; it will be discussed with the Track Department and will be subject to MBTA's approval.

As part of the condition-based maintenance policy, and related to the Track Department inspection feedback and track conditions, the track geometry engineer will propose an additional 10,000 ties replacement per Agreement Year to the MBTA.

The Technical Engineering Department will be in charge of supervising the track outages and exploring all available alternatives to service disruption in relation with the Authority. It will provide them with a weekly report of scheduled track outages.

Tie Job in Langogne (France)

The Technical Engineering Department will establish and provide to the MBTA for approval, a grade crossing improvement plan as part of the ESP. This plan will include a schedule and budget for the replacement and/or upgrade of at least 15 grade crossings per year having a design life expectancy of approximately 15 years, in accordance with MBTA Standard Plans and using equivalent materials, unless otherwise approved or directed by the MBTA. The improvement plan will include a detailed and itemized budget to determine various costs to include paving, rail, signals, utility upgrades, drainage, signage, etc. The locations of the grade crossing construction activities will be proposed with both Track and C&S Department's advice and will be subject to the approval of the MBTA.

The Non-Revenue Vehicles Fleet Administrator will be in charge of supervising and organizing the maintenance and use of the automotive and work equipment for the Department. He/she will manage the cleaning and maintenance subcontracts for the automobiles and trucks, as well as their annual inspection. He/she may be helped by a dedicated sub-contractor in charge of the fleet management.

Technical Documents Control

The Technical Engineering Department will be in charge of Technical Documentation Control, including circulation and update. It will be responsible for the application of the Engineering Standards in the performance of inspection, maintenance, repair, replacement, and construction work pursuant to the Agreement.

The Technical Documentation includes but is not limited to the following:

- Engineering Standards and specifications
- Technical Operator Deliverable Requirements (e.g. Engineering Services Plan, Track outages plan etc.)
- Action records
- Drawings, including material data
- Specifications
- Inspection procedures
- Test procedures
- Special work instructions
- Operational procedures
- Project Management Plans
- Risk and Contingency Management Plans
- Environment, Safety and Security Management Plans

Implementing Lean Management for Engineering Services

Lean methodologies will be implemented for the Engineering Services as part of the Continual Improvement Process, in order to streamline maintenance cycles and both industrialize and optimize replacement works. The expected outcomes are the following:

- Better, more standard production methods and processes;
- Waste identification and elimination; and
- Improvements in staff involvement in finding solutions and process optimization, making them more likely to subscribe to the resulting principles.

In the light of these results and SNCF Infra extensive experience, lean methodologies will be implemented for the Engineering Services as part of the Continual Improvement Process, in order to streamline maintenance cycles and both industrialize and optimize replacement works. We intend to implement Lean 6 sigma in its everyday management of the Engineering Services Department.

- Six sigma black belt extensive training will be provided to the Technical Engineering Department engineer in charge of Lean 6 sigma implementation
- 5S will be systematically deployed in our Work Equipment Maintenance Facility, as well as in storage and layover facilities
- Lean 6 sigma will be implemented on production tie jobs on rails and CWR replacements as a first step.

Training

Our training program for Engineering Services will be designed to enhance the knowledge and skills of

CASE STUDY: Lean Management Implementation for CWR Replacements at SNCF Infra

During the past 25 years, many organizations in the world have been writing and studying all aspects of lean manufacturing. The majority of these studies have been based on the famous Toyota Production System. Surprisingly, only a few companies in the world have developed those lean efforts in the railway industry. SNCF Infra is part of them, having deployed lean management tools for 10 years now.

SNCF INFRA has been facing number of challenges since then: investment costs and the network modernization plan continue to escalate in an economic climate where curbing costs and boosting industrial performance are the order of the day.

Against this backdrop, 40 maintenance worksites classed as important have been targeted for continual improvement processes in 2013. Sites involving the replacement of short rail lengths with continuous welded rails (CWR) are the first concerned by these operations ($86 M).

The Lean 6 Sigma project is then adopted with the following key principles:

- Collecting together all the work procedure and organizational documents for the worksites concerned during a workshop with the methods engineers and experts;
- Sending an outline form produced at the first workshop to the operatives for completion of the particular task list. Using this form for obtaining feedback from the gangs working in the field;
- Going to 4 or 5 worksites to watch how things are done so that the theoretical outline for operations can be compared with is really happening on site. This is also an opportunity to spot any instances of waste;
- Examining the observations recorded and producing an improved specimen process;
- Proposing this process at a workshop with the staff observed on site and then with line management. An exhaustive list of malfunctions and instances of waste should be drawn up together with details of the solutions to be enforced by the production teams and their managers;
- The resulting product is then tested over 2 to 3 other departments. Results are measured and analyzed to confirm the method before it is introduced as the standard.

The standard worksite approach is rolled out over all the different departments as part of a carefully developed communications process designed to ensure maximum support and the fullest possible understanding of the process.

Once the processes have been rolled out, the task list will be adapted in relation to feedback and any adjustments proposed.

The departments will then regularly measure their performance against the 40 standards set in order to pinpoint any eventual slippage.

Measurements are made by the gangs themselves, their managers and the methods engineers. The frequency with which such assessments are made will depend on the situation in the departments. A worksite that is well in line with the targets set will require little action, since it is abreast of the standard and unlikely to need tweaking. A worksite way off course will need to be improved by the production teams and therefore more regularly checked to pick up signs of improvement.

The first results show a cost benefit of 10% on the CWR replacement operations costs after 18 months.

Other processes, such as supply and inventory planning and management also benefit from such processes. As an example, another lean management approach has been performed regarding Work Equipment maintenance, using the 12 steps of Total Productive Maintenance (TPM). This method has dramatically improved the reliability of catenary maintenance cars over 45%, by using simple tools, such as Kaizen, 5S, process mapping and shadow training.

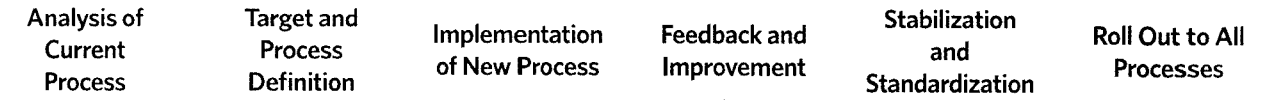


Figure 5-7: Lean Management Implementation Process

our employees in an effort to increase productivity, prevent incidents, protect the environment, ensure a secure work environment and develop leadership qualities. The program also serves as an integral facet in our company's endeavor to foster cultural growth. The quality and level of professionalism we provide and exhibit during the training provides a lasting impression of our management's commitment to safety and training.

Initial training will be the foundation of our structured training process to prepare our employees to safely perform their duties within their scope of work. Our employees will have the opportunity to experience their first exposure to our company during their initial training. Initial training is a three-day course that is comprised not only of the minimum regulatory requirements, but also customized safety and behavioral training. Although the regulatory aspect

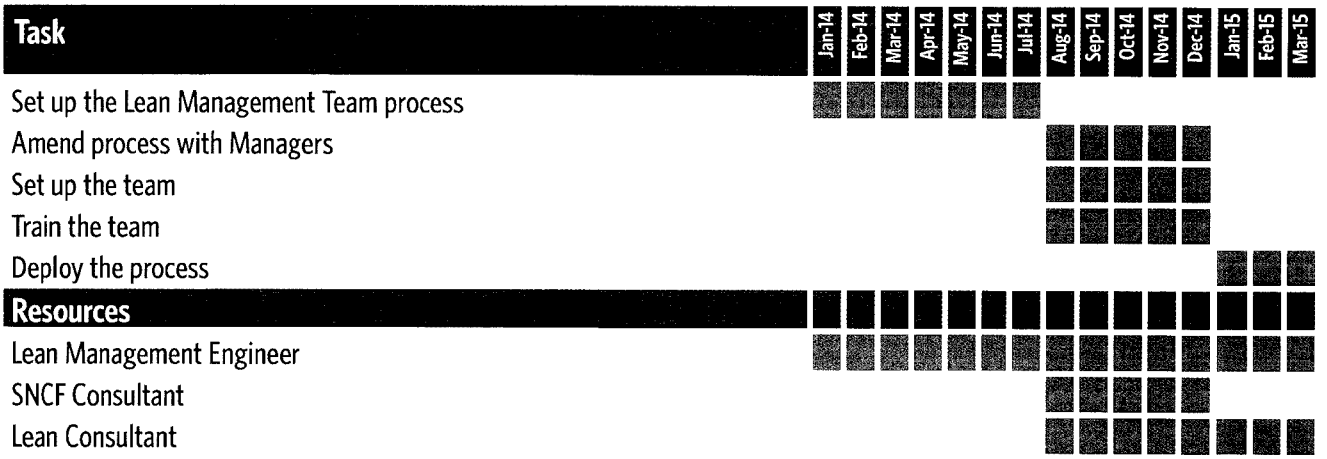
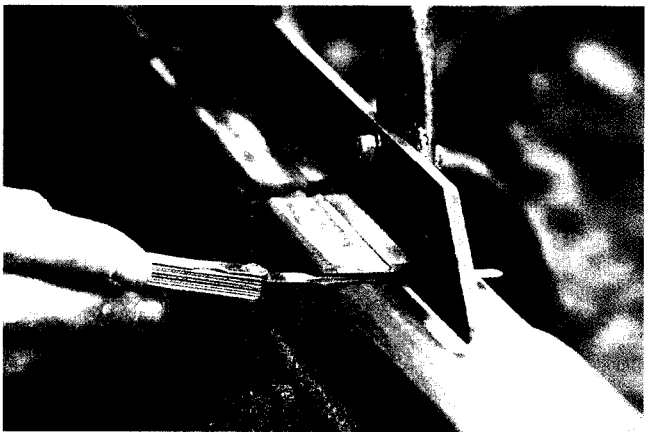


Figure 5-8: Lean Management timeframe



of initial training is not unique in itself, it is a cut above standard training methods and practices due to the proactive route we've chosen.

On-field Maintenance and Quality, Health, Safety and Environment (QHSE) training will help simulating intervention working conditions in a controlled environment. "Back to the Basics" Safety, Technical and Performance training on-field will be the second track of our program and is critical to ensuring that our trainees, both short service and experienced, are competent in performing their job duties.

Employee training program will be specifically designed to be consistent with the engineering services Performance and QHSE requirements and Applicable Law. In addition to ensuring that each employee is competent to perform the work assigned, our training representative will be in charge of continually analyzing, designing, developing, implementing and evaluating all training courses and other developmental interventions to ensure continual improvement.

A sound and transparent relationship with the MBTA Working Together for enhanced network performance

Moving Further Together, we intend to build a sound and transparent relationship. We expect such a cooperation to trigger numerous network benefits and concrete improvements in methodology, project steering and bilateral working relationships:

- Identify, study and address network performance issues together
- Combine our skills and know-how through dedicated bilateral teams
- Develop innovative tools and processes
- Boost breakthrough initiatives
- Work under pressure to tight deadlines to resolve difficult situations
- Make quick decisions on implementation and deployment
- Launch pilot projects
- Obtain measurable results
- Foster dialogue and training based on demonstration

As a first step, we propose to address jointly the following topics:

- Supplemental works management
- Replacements planning
- Moveable bridges conditions
- Rock fall hazard reduction
- Grinding policy

Reporting to the MBTA

We will keep, store, and maintain full and accurate Records relating to all aspects of the Services. We will furnish to the MBTA, at the times specified in the Agreement, all Records identified in or required to be maintained by us under the provisions of the Agreement, including as set forth in the Operator Deliverable Requirements Lists.

We will maintain and furnish to MBTA the Records, in writing and in electronic format, in accordance with the established delivery schedules.

The Daily Reports, as designated in the Operator Deliverable Requirements Lists will be transferred to the MBTA no later than 9:00 am on the next Business Day immediately following the day to which the Report relates. Weekly Reports, as designated in the Operator Deliverable Requirements Lists will be transferred to the MBTA no later than the close of business on the Monday of the following week. Quarterly Reports, as designated in the Operator Deliverable Requirements Lists will be transferred to the MBTA no later than the date of the submission of our monthly invoice for the

first month of the following quarter. The first quarter of each Agreement Year shall beginning on July 1.

Annual Reports, as designated in the Operator Deliverable Requirements Lists will be transferred to the MBTA no later than the date of the submission to the MBTA of our invoice for the first month of the subsequent MBTA fiscal year, unless otherwise specified.

"On Request" and "As Occurs" Reports as designated in the Operator Deliverable Requirements Lists will be transferred to the MBTA no later than 24 hours after the occurrence triggering a report unless otherwise required. "On Demand" Reports as designated in the Operator Deliverable Requirements Lists will be directly available on a continuous basis to the MBTA in an MBTA supplied or approved system.

One Time and Initial Submittals as designated in the Operator Deliverable Requirements Lists will be transferred to the MBTA no later than 4:00 pm on the date specified.

We will deliver to the MBTA for approval all Annual Program Plans including, without limitation, those designated in the Operator Deliverable Requirements Lists, and other deliverables specified by as the date specified. The MBTA will review each such plan, and will either approve such plan or, within 30 days of its receipt (unless otherwise required), and direct us to revise such plan. We will provide the MBTA with a plan revised accordingly within 30 days of receipt (unless otherwise required) of such revisions from the MBTA. Initial program plans will be delivered during the Mobilization Period on the schedule identified in the Agreement.

5.A.2. Inspecting, Repairing,and Maintaining Track, Signals, Communications Equipment, Train Control Equipment, Electrical and Railroad Bridges

Track

Track Department

The Track Department will provide inspection, maintenance, and replacement services for Track and Right Of Way to maintain it in Good Working Condition and to achieve the Performance Standard. We will provide all necessary inspection, testing and maintenance for the right of way and in particular for the track infrastructure. This will include, but not limited to, all normalized maintenance of rail, switches, ties, grade crossings and other appurtenances and facilities. Drainage and vegetation management will be an important element for us, as it ties directly into two key areas: safety and corporate responsibility. Additionally, we will maintain all tools, work equipment and the vehicle fleet required to support this operation in a safe and responsible manner. All activities will be lined to the Maintenance Management System and the Materials Management System so that work performed and resources expended are tracked and managed on a regular basis.

The Track Department will perform safety and security functions on an as-needed basis on those track segments designated with an "S" in the Asset Register. These functions include special inspection and repairs required after storm events or other exceptional or catastrophic events.

Inspection

We will inspect track and the right of way on a regular and on-going basis in compliance with the Code of Federal Regulations. In addition to the regular track inspections, we will perform monthly supervisory inspections and host regular inspection train trips, to which MBTA officials will be invited. We will maintain a regular schedule for the geometry car to ensure that each line segment is tested at least quarterly. Ultrasonic testing of rail will be accomplished in accordance to specifications in the MW 1 and in conformity with the bid specifications for this contract. All mainline tracks will be tested semi-annually and yard track annually consistent with a schedule generated by the Engineering Department's planning group.

The results of all inspections will be recorded on the prescribed forms, with prescribed supporting documentation. While originals of such reports

will be maintained in the field, copies will be sent to the Technical Engineering Department. Technical Engineering will act as a central repository for all inspection reports and be in charge of submitting them to the appropriate agencies. Technical Engineering will also provide the MBTA with a monthly summary report for all inspections, noting proposed remedial actions.

Corrective Maintenance

Any unsafe track condition, such as an improperly anchored rail, will require the implementation of a temporary speed restriction and immediate notification of the condition to the Track Department, the Technical Engineering Department Group and the MBTA. Immediate corrective measures will be taken by the Track Department crews to correct the condition in accordance with the MW 1, FRA standards and Engineering Services Standards.

Track surfacing and aligning will be performed in order to meet maintenance class requirements and maintain speed conditions authorized by maintenance class in the MW-1. We would note that correcting track geometry defects is not, generally, simply a matter of surfacing. Like and defect or condition, if the Root Cause of the defect is not addressed, any improvement may only be temporary.

The Geometry Car inspections mentioned above are a key tool in identifying root causes for track structure failure. Among other things this activity provides insight into foundational/subgrade issues, drainage and drainage structure condition and areas where additional attention must be paid to vertical or horizontal alignment issues which directly impact customer ride quality. Like all maintenance efforts the result of this action is, and should be, improved safety, ride quality and reliability.

The Technical Engineering Department Track experts will decide jointly with the Track Department where and when surfacing and aligning will have to be performed. Tamping operations will be scheduled in order to safely and efficiently optimize track lifespan.

SNCF Technology Improvements

The technical Engineering Department will explore the use of four SNCF - Infra technologies that will significantly upgrade our approach to maintaining the railroad asset infrastructure:

1. Track Geometry Improvements through Rail Grinding
2. 3-D Geo-structural Modeling of Rock Walls
3. GIS and Asset Management Software linked to our Work Order System
4. RUFEX: Reinforcement and Reuse of Existing railway subgrades and foundations

These technologies are more fully described in Appendices 5-1 through 5-4.

Right of Way Vegetation Control, Debris Removal, etc.

Brush and tree cuttings and state-approved herbicide-use will be performed in compliance with environmental regulations and Applicable Law, in order to keep brush cut back to the existing width of the Right of Way from property line to property line or as designated by the MBTA. Vegetation identified either by our Maintenance crews or by the MBTA as a nuisance or safety hazard will be removed promptly, and in any event, not later than 15 days after any internal report or notification by the MBTA.

Approaches to grade crossings will be kept clear so that approaches to the crossing shall be visible from the train. Approaches to all wayside signals will be kept free of vegetation in order to ensure a clear line of sight for approaching trains.

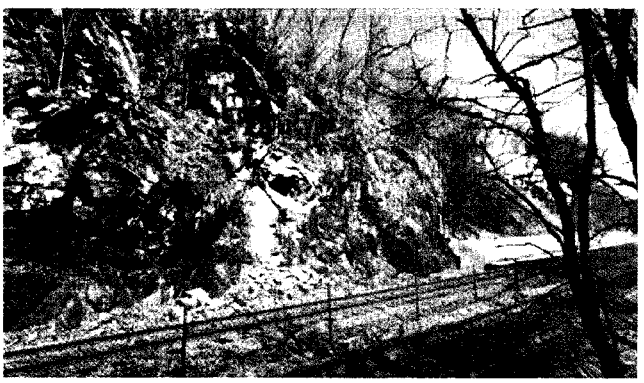
Rail, switch components, ties and OTM (Other Track Material) removed from service will be removed from the Right of Way within 30 days of removal, with the exception of any material that is considered a safety hazard, and which will be immediately removed. Materials awaiting installation will not be stored along the Right of Way for more than 30 days, unless otherwise agreed to by the MBTA. On site storage of continuous welded rail strings longer than 200 feet awaiting installation will only be executed after timely notification to the MBTA of the location and duration of such storage. All scrap rail will be removed from

the Right of Way within 30 days of removal from the track. We will identify relay rail and other fit material to be stored at designated and approved material storage locations, in order to minimize down time in case of track failures.

We will establish a program to regularly remove debris and rubbish from the Right of Way, and will report any illegal dumping activities, trespassing, and unauthorized use of the Service Property to the MBTA Police. Additionally we will post the property regarding trespassing and dumping and participate in programs such as Operation Lifesaver (described in Section 2 Safety Plan) to stress the safety concerns surrounding entering the property. Additionally, we will regularly maintain the fences and gates to discourage trespassing, and commit to responding to fence or gate issues in safety sensitive areas immediately upon identification of issues. We will replace up to two miles of property fencing during each contract year.

Rock Fall Issues

During our Pre Proposal Property Condition Assessment we observed a number of locations where rock falls are impacting the Right of Way. Sixteen sites have been identified as areas of concern and will have to be mitigated through the Capital and Productivity Improvement Plan to be proposed to the MBTA.



Spill Mitigation

We will provide a dedicated emergency response vehicle, manned by properly trained MOW employees, on-call for emergency deployment on a priority basis, equipped for cleanup and containment of fuel, oil and hazardous materials spills.

Replacements

The Track Department will be responsible for the following replacements in conformance with AREMA standards and Engineering Standards, as specified in the annual rail replacement program included in the ESP and approved by the MBTA:

- Rail replacement (5 track miles of CWR, including OTM, per Agreement Year)
- Crossties replacement (within the limit of 40,000 new crossties, per Agreement Year)
- Crossties spot replacement (within the limit of 10,000 per Agreement Year)
- Switch timber, bridges ties and timber, as required to maintain the Service Property in a Good Working Condition
- Frogs & switches when required by the corrective or condition-based maintenance procedures

The Track Department will be in charge of sorting all removed ties and timbers, separating ties to be reused on the Service Property from ties for disposal, within 30 days of removal. All cross ties to be reused will be neatly stacked and stockpiled whereas the remaining ties will be disposed through a properly certified and licensed hazardous materials disposal contractor, pursuant to all Applicable Laws and regulations unless other arrangements are made with MBTA written approval.

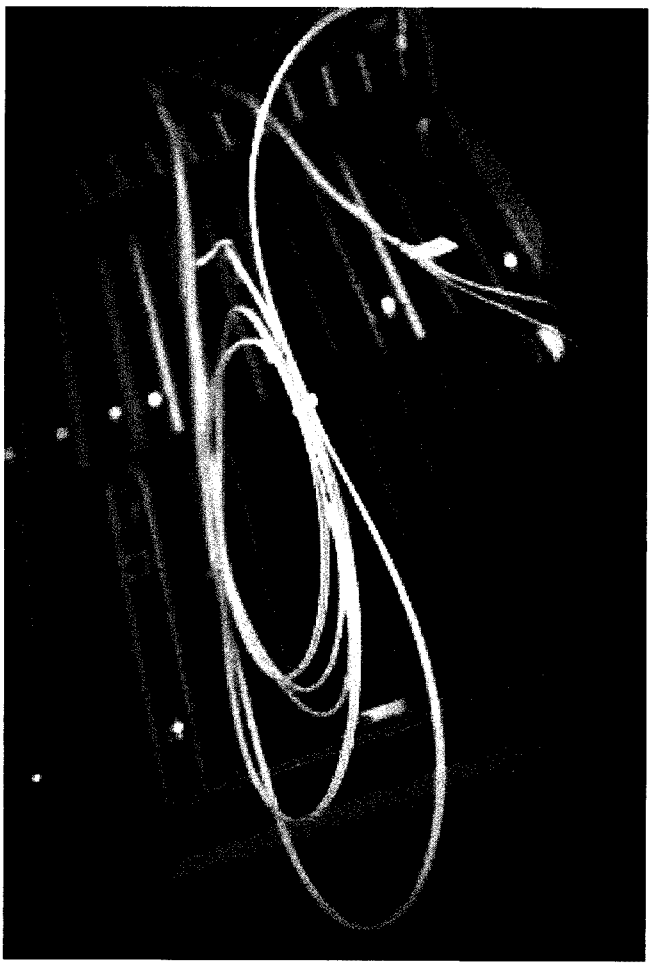
Any of those replacements will induce resurfacing and realignment of track and turnouts, in accordance with the Engineering Services Standards, by Track Department crews.

Repairs

All switch components and other track materials removed from track and deemed as reusable by mutual agreement of the MBTA and the Technical Engineering Department will be repaired for reuse by the Track Department. Material designated for reuse will be returned to the Support Inventory. Repaired and refurnished inventory returned to inventory will be tracked as such (reconditioned) in the Materials Management system.

Wreck Clearing

The Engineering Department will coordinate its activities with Mechanical and Operations to clear wrecks that involve MBTA trains and restore service in a safe and timely manner. The respective rights and obligations of the foreign railroad and the MBTA will be governed by the terms and conditions of the controlling trackage rights or operating agreements, if any, between the MBTA and that railroad.



Signals, Communications Equipment and Train Control Equipment

Communications and Signals

The Communications and Signals (C&S) Department will provide inspection, maintenance, and replacement services for signals, communications equipment and train control equipment in order to maintain it in a state of good repair. The responsibilities of the C&S Department will include all communications systems (including telephone, radio, computer interface) and all infrastructure to support these systems and all aspects of railroad signal systems (wayside signals, grade crossing warning devices, pole lines and cable to support same) as well as all aspects of the dispatching systems, and IT platforms to support all systems. This full suite of services will collectively be referred to as Communications and Signals.

The C&S Department will maintain all existing, reconstructed, or newly accepted signal and communications systems located on the property. No signal or communications systems will be installed, modified, or retired without prior written approval from the MBTA's Chief Engineer. For any installation, modification or retirement, we will prepare all necessary documents for MBTA approval and prepare and file all necessary applications to the FRA, Federal Communications Commission and/or Mass DPU.

In the event that emergency modifications in the interest of safety are required, we will provide MBTA with oral notification of such modifications within four hours of their initiation, and submit a written request for final modifications within twenty-four hours. The request will include a detailed explanation of the required modifications and the reason the emergency modification was initiated.

We will replace any temporary repairs with permanent repairs as soon as possible after the temporary repair is made. We will begin permanent repairs no later than the next day. If parts for a permanent repair are unavailable, we will notify the MBTA and immediately place the missing parts on the "None on Hand" list.

Any permanent modifications made to the signal or communication system will be recorded in the Commuter Rail IT Environment and hard copy of plans and documentation will be submitted to the MBTA Chief Engineer no later than 30 days after the modification is placed in service. Additionally, we will obtain all applicable warranty agreements in the name of the MBTA and provide any and all associated documentation to the MBTA.

Our C&S Department will be responsible for coordination with connecting railroads and other entities that abut the MBTA property with regard to any failures of devices or other matters that result in a danger to the safety of the general public, or result in conditions that give rise to public complaint. It will be our responsibility to take whatever measures are necessary to mitigate any such circumstances.

We will provide the necessary support and documentation for any regulatory proceedings to eliminate the need for crossing tenders at any crossing on the Service Property.

Signal and communication cases and apparatus will be kept sealed, locked, clean and free of all foreign material, such as: snow, ice, brush, rodents, insects, rust and graffiti, and be painted (paint type and colors determined by the MBTA). All apparatus will be painted at least once every three years, and more often if necessary to prevent corrosion, improve appearance or remove graffiti. Aluminum equipment may be exempt from this painting requirement depending on local conditions.

We intend to utilize approved replacement parts as replacement for failed or outdated parts or modules. We are prepared to retrofit and rebuild any parts no longer available from manufacturers, or seek appropriate in kind replacement with MBTA approval. Material that can be economically repaired, or has proprietary rights or patents established, or is covered by warranty, may be repaired by an outside vendor. This would include materials such as circuit card repair and return, and the equivalent

We recognize that False Proceeds can potentially place the public, employees and the service at risk. We will diligently monitor these events. Our protocol will at minimum, will follow applicable FRA regulations regarding investigation and reporting of false proceeds. We will also submit a preliminary report to MBTA (ODRL 3.2-063), within 24 hours of the reported false proceed, and a final report (ODRL 3.2-064), within 15 days of the false proceed, filed on form FRA F 6180-14.

We will develop and provide an annual Signal Failure Reduction program (ODRL 3.2-065) for MBTA approval as part of the annual Engineering Services Plan. Our goal will be to produce a five percent reduction annually on all preventable signal failures causing train delays. A preliminary plan for Signal Failure Reduction will be submitted to the MBTA no later than 120 days after NTP (ODRL 3,2-066), which will among other things,

identify three target areas annually for special attention based on reported failures..

A monthly Train Delay Report will be forwarded to the MBTA's Chief Engineer no later than the date of the submission of the monthly invoice to the MBTA. The report will include a breakdown of preventable and non-preventable signal and communications failures. Adjustments to the report will be made only after review and with concurrence of the MBTA Chief Engineer. This will be in addition to daily unusual occurrence and train delay reports

Inspection

The C&S Department will inspect and test all signal and communication systems on the Service Property on a regular and ongoing basis to assure that they are all in a state of good repair. This will be accomplished by periodic tests and inspection of MBTA signal and communication systems and apparatus as required by the Agreement, MBTA's CS-1, FRA Parts 234 and 236, and any other applicable laws, rules or regulations.

Repair

We will repair, or cause to have repaired, all relays, switch machines, switch circuit controllers, and other communication and signal apparatus necessary to maintain the Service Property in a state of good repair.

Signal Design

We will produce and maintain a complete set of "as-built" plans reflecting the current circuitry on all new system installations or newly modified pieces of such systems. We will create these plans and store them in the Commuter Rail IT Environment (ODRL 3.2-070) within 30 days of the time any modification or new installation to the Service Property is placed in service. We will provide updated field plans reflecting changes made to the MBTA within 30 calendar days of when such change is placed in service. Case revisions will be left at locations affected prior to leaving, informing others of ongoing revisions. We will keep correct,, up-to-date, and legible plans at all interlockings, control points, automatic signals, grade crossings and any other locations as required by FRA Parts 234 and 236 regulations.

Maintenance

Supervisory Control Systems

We will maintain all carrier lines, primary as well as redundant, in an operable condition at all times, and will perform periodic tests to ensure their integrity and that they are in operable condition. We will have in place a plan to ensure survivability and continuity of network services in the case of any catastrophic event or incident and ensure communications between CROCC and the CRMF, to the extent possible using MBTA communication facilities (lines, wires, fiber optics, radio frequencies).

We will provide qualified technical personnel to maintain the programmable logic controllers ("PLCs") used for supervisory control, as well as all electronic equipment used for train control systems including code servers, code emulators, and Vital Processor Controlled Interlockings.

Grade Crossings

Grade crossing gates, lights, and wires will be properly attached to apparatus following appropriate AREMA Section 3 Standards and in accordance with FRA Part 234 Regulations. Grade crossing warning systems will be maintained in accordance with the appropriate sections of the MUTCD 2000 as modified by Mass DPU. Lights will be aligned using AREMA Section 3.3.5 and Mass DPU standards. The use of Light Emitting Diode ("LED") signal lamps will be used as much as possible for signal lamps.

When required by the MBTA, we will provide appropriate engineering and other technical assistance to Third Parties in designing and installing the warning system determined to be appropriate to a particular crossing.

We will provide information to the MBTA regarding railroad operations involving specific highway rail grade crossings upon request, including but not limited to, present and projected rail traffic (including transportation of hazardous materials); present and projected

passenger traffic; present and projected track configuration and signaling; present and projected maximum authorized track speed and other conditions which may affect the planning for, and prioritization of, crossing improvements (ODRL 3.2-072).

We will ensure all appropriate devices and appurtenances are in place and functioning, and will report to the MBTA any gate and grade crossing malfunctions that result in "fail unsafe" conditions. We will submit a report to the MBTA within 24 hours of such event (ODRL 3.2-075), that provides the failure cause and proposed corrective action. We will remove vegetation from the Service Property, private property and roadways so that the view of the warning system from an approaching train or motorist is not obstructed. We will establish and provide to the MBTA for approval, an annual grade crossing event recorder program (ODRL 3.2-073), as part of the annual Engineering Services Plan. The program will provide a schedule to purchase, install and maintain a minimum of 10 new event-recording devices per year at grade crossings. We will provide, with the program, a list of those grade crossings not equipped with recording devices for MBTA's input on prioritizing future installation schedules. Event recording devices will have no fewer than 32 channels. We will provide a preliminary plan no later than 120 days after NTP (ODRL 3.2-074). All recording devices will be remotely accessible from end-user computers on the MBTA and our computer networks, and individually addressable with a common communications protocol. All recording devices will also be accessible via individual MBTA owned or outside telephone lines or facilities. Recording devices will have the capability of transmitting emergency failure data, such as power off, gate down, lamp out and track circuit occupancy, to CROCC and CETC.)

We will maintain crossing approach distances of sufficient length to accommodate the existing maximum authorized track speeds and adjust them as necessary in the event that changing track conditions warrant track speed changes.

We will post and maintain the crossing name, milepost designation, and maintenance phone number for each highway-grade crossing on each crossing bungalow, or at the crossing if there is no bungalow, in accordance with the Engineering Services Standards.

- We are prepared to take direction from MBTA as to whether and how additional technology and procedures may improve overall safety on the property. To the extent that MBTA wishes to pursue such options as vehicle detection systems, remote terminal units, visual monitoring systems, four quadrant gates, interface with first responder dispatch systems, additional quiet zones, or other technologies or programs designed to reduce the risk associated with highway-rail grade crossings, we will work meet those goals. In the area of new technology, we would note that SNCF has had significant success with both remote monitoring and control, and with traffic cameras in France.

Wayside Signals and Interlockings

Under no circumstances will any railroad material be stored in or around signal cases or signal masts.

Track wires and connectors will be properly installed in accordance with rail industry practice, to avoid exposure to mechanical injury and/or vandalism and in accordance with all applicable FRA Parts 234 and 236 regulations.

Signal number plates will be properly displayed so that signal identification cannot be mistaken. Signal interlocking bungalows will have the interlocking identification name displayed on both sides of the bungalow at Central Instrument Locations, and at all entrances to the interlockings.

Lamp change out records showing last date changed will be kept at each location. In addition, the change out date for each lamp with an appropriate apparatus identification number will be recorded in the Commuter Rail IT Environment. LED signal lamps will be used as much as possible for signal lamps.

The recording devices will be remotely accessible from MBTA offices and individually addressable by a standard PC with a common communications protocol, via individual MBTA owned or telephone company outside telephone lines or facilities. Items to be recorded must include:

- Power off
- Signal cleared or to stop
- Request for signal cleared or to stop
- Track circuit occupancy of all available track circuits including plant circuits and approach indications
- Request for switch
- Indication for switch
- Fire alarm conditions
- Manual operation of interlocking
- Intrusion alarms
- Bungalow temperature extremes

Pole Line, Wire, and Cable

We will maintain al pole lines, wire and cable to proper standards at all times during the contract. Temporary wires or twisted pair will be replaced promptly, in accordance with FRA Regulations, but not to exceed 30 calendar days. We will protect all wiring and cabling from damage. They will be inspected, and tested in accordance with the Engineering Services Standards, Rail Industry Standards, and FRA requirements. Wire and cable will be replaced as part of the Annual Fee when damaged through negligence on our part. All pole line wire and cabling will be maintained in accordance with the guidelines set forth in the Engineering Services Standards.

Communications

We will provide 24 hour alpha-numeric messaging service to alert our staff and designated MBTA staff of service related incidents. We will complete, on behalf of the MBTA, radio license applications and materials for MBTA's submission to licensing authorities. We will maintain in the Radio Shop Facility all radio equipment located in locomotives and cab coaches. We will maintain all two-way radios, base stations and antennas, including those used by the MBTA.

We will maintain all communication equipment, public address and intercom systems used on the service property in Good Working Condition, including LED scrolling sign systems installed at train stations and vehicle location systems (GPS, wayside transponders, and the like). We will ensure as part of our cleaning regime for stations that LED operation is checked at least weekly. Failures reported to the Customer Service Hot Line will be addressed on a priority basis.

We will maintain the MBTA-owned fiber optic systems used for the provision of Agreement Services, including all telecommunications interfaces and/or telephone, code lines, radio lines and data lines that interface with the systems.

Electrical

We will provide complete electrical service and maintenance, and provide a reliable and adequate power source for all of the Service Property, including but not limited to buildings, stations, layover facilities, roadways, grade crossings, switch heaters, substations, area lighting and draw bridges.

We will provide all resources and maintain inventory and parts required for the maintenance of electrical systems and lighting on the Service Property in a timely fashion. We will record and monitor inventory in the Commuter Rail IT Environment.

We will identify testing and maintenance measures with the potential to reduce cost, save time, simplify procedures, or the like, to the MBTA. We will recommend these measures in report form as measures are identified. These reports will contain cost estimates for the improvements or changes, and estimated annual or one-time savings. These reports will be submitted no less than annually.

We will develop and submit to the MBTA Safety Department within 90 days after NTP a Lock-Out Tag-Out Procedure (ODRL 3.2-085) to protect workers from electric shock hazards.

We will review the available database of electrical and lighting equipment provided by MBTA and field inspect all of the Service Property to familiarize the Operator Personnel with the type and quantity of equipment that requires testing and maintenance. We will add to the database any existing or additional equipment that provides electrical service or lighting to the Service Property (ODRL 3.2-086). This will be done no later than 120 days after NTP.

We will inherit, maintain and/or develop complete records for all electrical and lighting equipment on the Service Property and maintain them in the Commuter Rail IT Environment. These records shall contain, at a minimum, specific information with regard to the types of maintenance and testing required, and the testing frequency. After the Agreement Services Commencement Date, We will update these records with any changes in equipment or procedures.

We will use the Commuter Electrical Department Millennium Edition Rules and Procedures document as a reference. Based on this document and industry standards, we will develop rules and procedures for electrical testing and maintenance (ODRL 3.2-087) and submit these for MBTA approval within 90 days after NTP.

We will maintain a membership within the IEEE, for the benefit of ourselves and the MBTA, providing a copy of all IEEE manuals to the MBTA.

Testing and Maintenance Responsibilities

We will test and maintain all electrical and lighting equipment on the Service Property in accordance with the following standards:

- Wherever applicable, the International Electrical Testing Association (NETA) Maintenance Testing Specifications, MTS-2011
- Where requirements are not specifically detailed in the reference standard noted in the RFP, the FM Global Publication 5-20, dated September 2001.
- Where requirements are not specifically detailed in the reference standards noted in the RFP, the manufacturer's recommendations at a minimum, or in the absence of those, per current applicable engineering practice.

We will set the frequency for electrical and lighting equipment testing and maintenance according to the following guidelines:

- Wherever applicable, Appendix B of the NETA Maintenance Testing Specifications, MTS-2011, using the matrix multiplier of 1.0
- Where requirements are not specifically detailed in the reference standard noted in the RFP, the testing and maintenance frequency shall be as per FM Global Publication 5-20, dated May 2001
- Where requirements are not specifically detailed in the reference standards noted in the RFP, the testing and maintenance frequency shall be as per the manufacturer's recommendations at a minimum, or in the absence of those, per good engineering practice.

We will be responsible for the implementation of all electrical and lighting testing and maintenance activities, including but not limited to scheduling, utility coordination, outage duration, and notification.

We will keep the MBTA apprised of activities in this area on a monthly basis, through the reporting and meeting requirements described below.

We will inspect and maintain all lighting on the Service Property, including without limitation, stations, yards, buildings, roads, and parking lots. We will inspect all lighting installations on a monthly basis at a minimum. All lighting will be inspected and maintained so that no less than 90% of the lighting at every location is functional. Unlit areas will not exceed 10% of lighting at any one location, and if a lighting deficiency is concentrated so as to create a dark spot, it will be corrected immediately. Every effort will be made to achieve 100% lighting at all locations.

We will repair or replace all ballast, lenses and vandal shields if they are found to be defective. When replacing bulbs, we will ensure that the fixture is aimed correctly and ensure that any house side shields are reinstalled. Light bulbs

will be replaced on an annually basis and as otherwise directed by the MBTA.

We will clean all light fixture lenses when replacing bulbs. All replacement light bulbs will be mercury free.

Where the MBTA utilizes Third Party cleaning contractors on the Service Property, we will supply the Third Party cleaning contractors with mercury free light bulbs to be used as replacements. Lighting and electrical fixtures installed or replaced will be tamper-resistant and in accordance with the Engineering Services Standards. Any fixtures replaced will provide more light than that which existed previously, except with the express written permission of the MBTA Chief Engineer.

We will maintain the layover ground power receptacles and all layover facilities in a Good Working Condition.

We will test and maintain fire alarm and detection systems on the Service Property as per NFPA 72 and will install fire protection systems on the Service Property as per NFPA 25. The frequency will be as indicated in NFPA 25 Table 2-1.

Inspection, Maintenance and Operation of Electric Switch Heaters

We will inspect, maintain and operate all electric switch heater systems, including any associated appurtenances, contained within the Service Property.

We will maintain track switch snow melting equipment as installed and in accordance with the latest revision of MBTA Standard Plan 3040 "Typical Snow Melter Layout." In the case of older installations, they will be maintained until replaced in accordance with MBTA Standard Plan 3040.

In preparation for the winter season, we will ensure that all electric switch heaters are in Good Working Condition by September 15th of each Agreement Year.

Energy Conservation and Utilization

We will provide energy conservation and utilization audits for all of the Service Property maintained. We will review on a monthly basis all energy bills for correctness and consistency with invoicing and consumption over the previous 12 months. We will investigate and reconcile any unusual energy consumption and invoicing.

We will input all electric services billing data that contains monthly kW and kWh consumption, along with class of service, location information, service number and other data pertinent to an electronic database and provide same information to MBTA (ODRL 3.2-096).

We will review on an annual basis each electric service to determine if it is billed under the most cost beneficial electric tariff available. Subject to MBTA approval, we will renegotiate agreements with the appropriate utility provider for any services that are not under the most cost-effective tariff. We will scan the energy market environment on a monthly basis to determine the least expensive commodity prices available and secure same if it proves to be both reliable and adequate. We will work with utilities and energy service companies to audit energy end-uses to implement cost-effective load management strategies and electric service consolidations, and to audit energy use at each building, facility for the purpose of investigating and implementing energy and cost efficient measures and equipment.

We will develop a strategy and implementing a program that details the judicious use of switch heaters for minimizing energy consumption without impairing their intended use or contributing to any service delay.

Wind Turbines

We will subcontract the operation and maintenance of both the 100 KW wind turbine located adjacent to the Kingston Layover and the wind turbine located on the commuter rail right of way adjacent to the Titicut Road grade crossing in Bridgewater. Both wind turbines will be operated and maintained pursuant to the O&M Manual provided by the applicable manufacturer of the wind turbine.

Railroad Bridges

We will inspect, evaluate and maintain in a state of good repair all overhead and under-grade bridges that are part of the Service Property for which the MBTA has maintenance responsibility in accord with the RFP. For those structures not in a state of good repair, we will work with the MBTA, MassDOT and other Agencies to prepare a longer term program for these bridges. As the general requirements for the inspection, evaluation and load rating of the MBTA commuter rail Environment bridges are defined in the Code of Federal Regulations, FRA 49 CFR Part 237, we will prepare a Rail Bridge Management Program (RBMP) in accordance with 49 CFR Part 237.5. Our RBMP will incorporate all of the required Operator Deliverable Requirements List (ODRL) items that specifically relate to the inspection and evaluations of railroad bridges and culverts. These items in turn will be incorporated into our Annual Engineering Services Plan.

Our RBMP will be based, at least, on the following documents:

- American Railway Engineering and Maintenance of Way Association (AREMA): Standards and Bridge Inspection Handbook
- 49 CFR Parts 213 & 237 Bridge Safety Standards
- American Association of State Highway and Transportation Officials (AASHTO): Standard Specifications for Highway Bridges
- Federal Highway Administration: Various Inspection Manuals that generally apply to all bridges (underwater inspections, culverts, etc.)

Our Railroad Bridge Maintenance Program will have the following objectives to:

- Fulfill all of the requirements of the MBTA's RFP
- Fulfill the requirements of 49 CFR Parts 213 and 237
- Develop and implement safe procedures for the inspection and evaluation of various railroad bridges including both above and underwater inspections
- Develop plans to maintain each bridge structure in a state of good repair or to bring it to a state of good repair
- Discover potential structural deficiencies within the bridge structures and to action to ensure that these deficiencies do not become hazardous to our employees or customers
- Conduct condition evaluations on each bridge
- Plan routine maintenance activities and minor repairs - as defined in the RFP - on all MBTA owned bridges and tunnels as well as retaining walls, back walls, wing walls, etc. and vegetation clearing, removal of graffiti and cleaning

Overhead and Undergrade Bridge Major Repairs

Major Repairs - as defined in the RFP - to any MBTA-owned bridges are not included in our Annual Fee, with the exception of damage we may cause in whole or in part. We will submit a separate price for any Major Repair services requested by the MBTA and such jobs will be handled as Supplemental Work. We include this Proposal any temporary measures required to keep a bridge in service until such time as Major Repairs are complete.

MBTA may, at its option, employ a Third Party contractor to perform Major Repairs. We will provide flag protection for any such repair work, being compensated through a direct agreement between us and such Third Party.

Drawbridge Operation

We will post rules governing drawbridge opening, emergency telephone contacts, tide boards, marine band radio frequencies, and any information required by the U.S. Coast Guard, FRA or other such regulatory agencies at each drawbridge. We will repair and maintain in Good Working Condition all controls, contacts, mechanical components, and other appurtenances and systems associated with MBTA owned moveable bridges located within the Service Property.

We will record all drawbridge openings and failures in the Commuter Rail IT Environment. A copy of this report will be kept at the

drawbridge location. Copies of all inspection and maintenance documents will also be kept at the drawbridge location.

Replacements

We will replace not less than 500 linear feet of timber bridge decking per Agreement Year. We will coordinate all Minor Repairs and Major Repairs to coincide with the timber bridge deck replacement.

No less than 500 square feet of protective screening under bridges and structures for pest and bird control and protective fencing along bridges will be installed or replaced per Agreement Year. We will maintain these materials as may be necessary to function as intended. Additional screening will be installed as directed by the MBTA to protect the general public, those tasks being compensated as supplemental work by the MBTA.

5.A.3. Inspecting, Maintaining, Repairing, and Managing Structures, Buildings, Stations and Platforms

We will maintain the Support Property and facilities required to perform Agreement Services. We will inspect and maintain all layover facilities, buildings, facilities, stations, drainage systems, culverts, switch heaters, tunnels, and pedestrian structures that are part of the Service Property in a safe and workmanlike manner. All work will be compliant with applicable Federal and State laws, including applicable Federal, state and local accessibility laws. We will perform structural inspections not less than once per Agreement Year, and more frequently as required, on all structures that are part of the Service Property, including those not used in the performance of Agreement Services.

We will document and record all inspections in the Commuter Rail IT Environment. All structural inspections will be accompanied by appropriate digital photographs and other support information.

For those buildings listed in the Asset Register that are not used in performing Agreement Services, we will perform safety and security functions on an as needed basis. We will provide periodic inspections as directed by the MBTA or as necessary to ensure the safety and integrity of the facilities. The cost for these inspections will be included in our Annual Fee. We will repair any defects found or perform remediation work, for these buildings as directed by the MBTA, which will be compensated as Supplemental Work. The facilities not used in performing agreement services are the Main Office, Main Shop, Stores, Systems Office, Fire Pump House, Power Plant, and Frog Shop (all at Billerica MA), and Attleboro Tower),

Structures - Tunnels, Pedestrian Structures, Culverts and Drainage Systems

We will maintain all structures (tunnels, pedestrian structures, culverts and drainage systems) to a state of good repair. We will perform all periodic inspections as required and will in all cases coordinate all activities with the appropriate permitting agencies.

Tunnels

We will maintain all mechanical equipment associated with such tunnels (vibration attenuation, ventilation, safety lighting, fire protection, air curtains, standpipes, drainage systems), address leaks, control winter ice build-up and maintenance to the tunnel structure and appurtenances. We will inspect, repair and maintain all emergency access and egress routes to ensure the safety of customers, emergency response personnel, and employees. We will keep all tunnel niches and track surfaces free and clear from debris at all times. We will pay particular attention to removal of flammable debris. Under no circumstances shall anything be mounted or stored in niche areas.

Operation and maintenance will include but not be limited to the following existing locations: Salem Tunnel, Back Bay Station and approaches including the Prudential Tunnel, Hingham Tunnel, Weymouth Landing, Kingston, and Quincy Center.

Pedestrian Structures

We will inspect and maintain all structures used or designed to allow pedestrian movement across, over or under the Service Property ("Pedestrian Structures"). We will maintain the cleanliness of Pedestrian Structures and the adjoining fences, lighting, drainage, vegetation, surfaces, ramps, stairways, etc., in a manner that encourages use of the structure. All graffiti will be removed from Pedestrian Structures in compliance with the RFP.

Culverts

We will be responsible for all culverts located on the Service Property, any undergrade structures 10 feet in length or longer. We will annually inspect, clean and perform maintenance and repairs as needed on all culverts contained within the Service Property to maintain the culverts in Good Working Condition, consistent with original design profiles. Inspections will include digital photographs of the culvert condition. All inspection and repair activity will be recorded in the Commuter Rail IT Environment by the Technical Engineering Department. We will keep all culvert approaches free and clear of all debris and vegetation, and replace no less than six culverts per year. All failed or replaced culverts will be replaced with a culvert of equal size and capacity.

Drainage Systems

We will maintain all manholes, catch basins, clean-outs and any other drainage structures or systems used to direct the flow of water on or from the Service Property (collectively, "Drainage Systems") Storm water catch basins will be maintained as necessary and clogged sewer lines snaked as necessary.

In case any Drainage System or portion need any replacement, the system will be designed and constructed based on an evaluation of the current drainage conditions and applicable regulatory requirements. At a minimum, the Drainage System will be designed to handle a 50 year storm.

Layover Facilities

Inspection, Maintenance and Repair

We will maintain the layover facilities, including all buildings, trailers, driveways, parking areas and grounds, ground air systems, electrical systems (including train stand-by power), water systems, fire hydrants, septic systems and storm water systems (including waste water treatment and/or pumping systems). Wastewater work, septic tank and toilet dumping station pump-out, as well as management of oil water separators, will be performed by fully qualified environmental subcontractors.

We will perform or subcontract rubbish removal weekly, or more frequently as necessary, at all layover facility locations on the Service Property. We will maintain and repair toilet dumping stations on a scheduled basis and repair any defects within 5 days of notification. Toilet dump stations will be emptied on a regular scheduled basis in order not be allowed to become overfull or unavailable for use due to failure to drain them on a timely basis.

Buildings, Facilities, Rolling Stock Support Equipment, and Stations

We will be responsible for the inspection, management and maintenance of all buildings, facilities and stations. All equipment and facilities will be maintained in a safe and workman-like manner. We will use Buildings and Facilities exclusively for the performance of Agreement Services. We will determine the warranty status of station, building, and facility equipment and appurtenances, and administer any warranties in effect. We will also administer and pursue warranty claims on behalf of the MBTA and anticipate the need to perform reimbursable warranty work. We will inspect all Station Fixtures (as defined herein) to assure the safety of the Customers and will maintain, repair, repaint, or replace as may be required to keep said fixtures in a "like new" condition at all times. "Station Fixtures" will include, but not be limited to, canopies, railings, light poles, sign frames, signs, bulletin boards, parking lot

pay boxes, windscreens, shelters, benches, bike racks, and trash receptacles and other fixtures or furniture that may exist from time to time. We will maintain station platform safety stripes and tactile edges in a bright yellow and highly visible condition. Platform safety stripes and tactile edges will be repaired within one week after defects or damage reports are made unless otherwise approved in writing by the MBTA.

We will input data into the Commuter Rail IT Environment regarding inspection and maintenance activities on the Southside S&I Facility, Abington, West Cambridge, Cobble Hill, and Readville Engineering and Mechanical facilities in a level of detail equivalent to that for CRMF.

General Building, Facility and Station Maintenance

We will maintain all building systems, equipment, components, and utilities. We will maintain the Information Booths at North Station, South Station, and Back Bay Station in a clean and attractive manner so as to encourage their use by Customers.

We will develop and implement an elevator inspection and maintenance program for the elevators at CRMF, Cobble Hill, Southside S & I, and Framingham (ODRL 3.2-037), subject to MBTA review and approval. This plan will include proposed availability levels by location. The initial program will be submitted no later than 120 days after NTP and thereafter updated as part of the annual Engineering Services Plan (ODRL 3.2-038).

The station, building and facility annual work plan will include a monthly staffing plan (ODRL 3.2-041) for all work planned during the year. This staffing plan will be updated monthly to reflect work plan changes that may develop over the course of the year. The station, building and facility maintenance program will also include a spring cleaning and touch-up for all stations, buildings and facilities. We will obtain the approval by the MBTA prior to the use of any paint colors that differ from those in place as of the Commencement Date.

We will provide complete interior improvements, to no less than five stations per Agreement Year. The location, manner and extent of this work will be approved by the MBTA prior to any work being done or materials being ordered

We will perform inspections no less than twice annually to assure the safety of the Customers and will maintain and repair parking facilities in a Good Working Condition exclusive of parking areas maintained and operated by the MBTA, a municipality or Third Parties. All potholes will be repaired as expeditiously as possible and with due diligence, but no more than 10 days after defect report is made.

and debris on a year round basis. All trees and shrubs will be pruned yearly or as directed by the MBTA. All landscaped areas, platforms and parking areas will be kept weed free on a year round basis. All landscaped areas that have a mulch bed will be re-mulched on a yearly basis, between April 15 and June 15, with current season pine bark mulch. All dead or diseased hedges, shrubs and trees will be replaced as We will clean all station track areas at least once every three months or more frequently as directed by the MBTA. We will pressure wash station platforms and the underside and tops of North Station and South Station canopies semi-annually or more frequently as directed by the MBTA. Associated flagging costs will be included in the Annual Fee.

Building and Facilities

Inspections and Removal of Deficiencies

Within 90 days after NTP, we will submit to the MBTA for review and approval a preliminary Support Property and Facilities Maintenance Plan (ODRL 3.2-026) which describes our proposed plan for operating and maintaining the MBTA's facilities, equipment and appurtenances. The preliminary plan will address, at a minimum, proposed staffing, operation, maintenance, safety, regulatory, and evacuation plans for each of the major facilities. The Support Property and Facilities Maintenance Plan will be part of the Engineering Services Plan, updated accordingly and subject to the same process as the

Engineering Services Plan. It will include annual maintenance projects, additions, modifications and upgrades to existing facilities and a long-range (at least a three year forecast) facility plan which will include an inventory of facility improvements to Mechanical Department facilities to accommodate maintenance and repair of the revenue fleet. The annual maintenance plan will also include budgeted and prioritized preventive maintenance projects for structures and installed equipment such as cranes, wheel true machines, drop pits, wash machines, and similar equipment.

We will implement the Support Property and Facilities Maintenance Plan on the Agreement Services Commencement Date. Within 90 days after NTP, we will provide a facility inspection form for MBTA's approval. We will make revisions to the form as MBTA requests, finalize the form and add the items contained on the form to the Commuter Rail IT Environment.

We will inspect each facility on the Service Property at least once per calendar quarter using the MBTA approved facility inspection form. The results of each inspection will be entered into the Commuter Rail IT Environment. We will restore, repair or replace all noted deficiencies within one week after each inspection. Exceptions will require the prior written approval of the MBTA Chief Engineer. Deficiencies which present a safety hazard to the public will be corrected immediately. We will perform all inspection, maintenance and repair services for CRMF and associated facilities, equipment and appurtenances in accordance with the Support Property and Facilities Maintenance Plan. For other major facilities, we will evaluate the maintenance requirements at each facility, determine the appropriate industry standards and warranties that cover each facility, and maintain each facility according to those requirements, standards and warranties. We will not leave Support Property disconnected, jumpered, defective, locked out, or otherwise inoperative without prior notification to and written authorization from the MBTA. Any parts or material required to secure or restore Support Property that is out of service will be identified and included in the "None On Hand" process described in the RFP.

Rolling Stock Support Equipment

We will be responsible for the operation, inspection, maintenance and repair of all shop equipment used primarily for the inspection, maintenance and repair of the Rolling Stock Fleet ("rolling stock support equipment" or "RSSE").

Jointly with the Mechanical Department we will perform a condition assessment within 120 days after NTP of all shop equipment designated as RSSE. This will include, but not be limited to jacks; hoists; bridge cranes; jib cranes; drop tables; lathes, milling machines, drill presses and other machine shop equipment; wheel truing machines; train wash equipment; winches; car progression systems; and other equipment and apparatus deemed RSSE. This assessment will include an estimate of the remaining life expectancy of each piece of RSSE. This assessment will be updated as part of the annual Engineering Services Plan.

We will develop and implement, based on the condition assessment and subject to MBTA review and approval a Good Working Condition Program for all RSSE. This will include periodic inspection and maintenance for each piece of equipment as well as scheduled repairs required in order to bring all pieces of RSSE to a Good Working Condition. The initial program will be submitted for review and approval no later than 120 days after the Mobilization Commencement Date., and updated as part of the annual Engineering Services Plan.

We will develop and implement, subject to MBTA review and approval, a Rolling Stock Support Equipment Normal Replacement Program. This program will identify when specific pieces of RSSE will be scheduled for replacement. The initial program will be submitted 6 months after the Mobilization Commencement Date, updated as part of the annual Engineering Services Plan.

We will include an annual allocation of $100,000 within the Annual Fee to support the RSSE Normal Replacement Program, which is not intended to

limit the annual normal replacement of RSSE to $100,000, but is intended as a guaranteed source of funding for such replacement, to be expended as approved by the MBTA. Funding for normal replacement of RSSE is in excess of $100,000 per Agreement year will be requested as Supplemental Work.

Stations

Inspections and Removal of Deficiencies

Within 90 days after NTP, we will provide a station inspection form for MBTA's approval. We will make whatever revisions to the form that MBTA requests, finalize the form and add the items contained on the form to the Commuter Rail IT Environment.

Daily audits will be done at North and South stations. Each inspection will involve checking the cleanliness of the station and that all advertised services and facilities are working. If not, deficiencies will be reported to the Engineering Department Bridges, Buildings and Facilities Department.

The daily audits will be used to monitor and improve service quality and to manage any subcontractors to deliver to standards:

- Auditing against a comprehensive checklist will enable rapid identification, reporting and resolution of faults
- The checklist will be aligned with the performance regime
- Incorporation of the results of the daily audits into our quality system will enable monitoring/ review of persistent faults and patterns or trends across the network

We will inspect all at least once per calendar quarter using the same MBTA approved station inspection form or embedded application. The results of each inspection will be transferred into the Commuter Rail IT Environment and will be available to the MBTA at any time.

We will restore, repair or replace all noted deficiencies within one week after the inspection. Exceptions will require the prior written approval of the MBTA Chief Engineer. Deficiencies which present a safety hazard to the public will be corrected immediately.

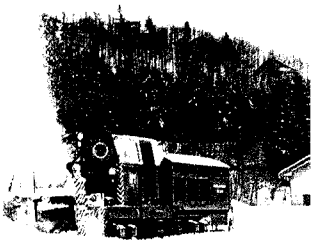
Cleaning

We will keep all exterior and interior surfaces of stations free and clear of graffiti according to the RFP. In addition, we will keep the grounds, curbs, walkways and other station areas free and clear of trash, debris and graffiti, paying special attention to those areas directly in the path of commuter rail customers. We will provide a schedule for station cleaning activities, prioritizing the activities by level of station use, as part of the Station, Building and Facility Maintenance Program. This schedule will be published not less than annually and be included in the annual Engineering Services Plan. Cleaning will be performed at intervals of no more than two weeks apart for the least used stations, and more often for busier stations. We will submit a report of its cleaning activities monthly.

Snow Removal

We will be responsible for snow removal, sanding, and salting operations from all building, facilities, stations and parking lot areas at all locations on the Service Property, exclusive of locations where these operations are contractually performed by Third Parties. We will remove snow from platforms, sidewalks, roadways, parking spaces, auxiliary areas, and any area where snow poses a safety risk to Customers, our Personnel, or the general public. This work will be scheduled when possible such that these areas are completely cleared of snow prior to the beginning of the next rush hour. We will plan for and react quickly to remove ice and snow from traveled areas to keep users of the Service Property safe and minimize our liability and the MBTA's. We will keep all platforms, walkways, ramps and parking areas clear of ice and snow. This work will be compliant with all federal, state and local accessibility laws and regulations.

We will establish and provide a snow removal plan to the MBTA for approval no later than Labor Day of each Agreement Year. The plan will identify labor, equipment, materials,



management, repair facilities, chronological station assignments, initial starting points, back-up contractors, important names and phone numbers, and preseason activities. The plan will include a strategy for effectively utilizing our labor resources during storm events. The plan will also identify responsibilities in Transportation, Mechanical, and Customer Service areas. All preseason activities (including shovels, brooms, pushers, snow blowers, gas, oil, sand, and salt stored at all locations. Labor forces assigned to draw and swing span bridges equipped with brooms, shovels, salt and sand) will be pre-positioned by November 15 of each Agreement Year This material will be treated as Critical Material as provided by the Materials Management requirements of the RFP.

A storm-specific plan will be discussed and submitted prior to the start of every snowfall meeting the established criteria. During the execution of the storm-specific plan, all available personnel and equipment resources will be deployed with safety and passenger convenience as the primary considerations. The storm specific plan will also take into consideration Personnel fatigue.

We will perform as much snow removal as possible with maintenance employees who are involved in providing the Agreement Services on a full-time basis.

We will inspect and oversee snow removal work performed by Third Parties, to keep users of the Service Property safe and minimize our liability and the MBTA's. We will notify the MBTA if a Third Party fails to perform snow removal duties.

Snow removal will begin no later than when a snowfall of two inches has accumulated when any storm forecast projects an accumulation of more than four inches or when icy conditions on streets and walkways require sanding or salting. Snow removal will continue uninterrupted until snow removal is complete.

Snowstorms forecast to be less than four inches will be addressed for safety concerns immediately, but may otherwise await daylight for the complete snow removal effort.

In the event conditions change during the storm, we will be prepared to address a storm event of greater than four inches without incurring a significant delay or safety hazard. Ice and freezing rain reports will be addressed immediately.

We will repeat and continue due diligence to satisfactorily prevent an unsafe or hazardous condition from developing.

Sand and/or chemicals will be applied in the manner and quantities stipulated in our snow removal plan. At all times, application of these materials will be performed in accordance with all applicable laws, rules and regulations. At no time will salt or salt-based chemicals be applied to any concrete surface in quantities that will cause damage to the concrete surface.

Ice melting agents will always be applied immediately following each snow removal "pass" and when slippery conditions are anticipated.

When snow piles reach a level that restricts parking or interferes with pedestrian traffic, snow removal operations will be implemented.

We will plan for and react quickly to remove ice and snow from all Pedestrian Structures and traveled areas to keep users of the Service Property safe and minimize our liability and the MBTA's.

Bridge tenders will ensure drawbridges are in operable condition at all times, and we will perform snow removal activities so that layover facilities are accessible at all times.

We will develop and implement operating rules and procedures for on-track snow plows to efficiently and safely remove snow from tracks without causing damage to track structure, wayside infrastructure or grade crossings.

We will control ice buildup in tunnels during the winter months so as not to interfere with tunnel clearance and the safe movement of trains. Emergency escape hatches associated with tunnels will be kept clear of snow, and measures will be taken to assure that these hatches never freeze. Weekly inspections and testing will be conducted and documented as directed by the MBTA in the Commuter Rail IT Environment to assure that snow and ice do not interfere with proper hatch operation.

All fire protection standpipes at street level and corridor level will be cleared of snow immediately following a snowstorm. Within 48 hours of a major winter storm or as directed by the MBTA, the MBTA Chiefs of Transportation, Mechanical and Engineering will meet with their Operator counterparts, and evaluate the level of service attained during the storm.

- Planning for improvements and correction of any deficiencies will commence at this time. The MBTA may prescribe special instructions to implement improvements or corrective actions.
- We will provide a post-storm fitness report identifying any damage encountered and the general condition of the Service Property.

We will repair all damages to parking areas caused by snowplowing as soon as possible and not later than May 1st of each Agreement Year.

5.A.4. Operating the MBTA's Fleet of Non-Revenue Rail Vehicles and Railroad Work Equipment Vehicles

Moving Further Together, we will review the entire Non-Revenue Rail Vehicles and Railroad Work Equipment Fleet in order to "right size" this fleet for the scope of operations that we will be undertaking. We will sub-divide this fleet into four discrete sub-fleets:

Non-Revenue Rail Vehicles

1. General Purpose Sedans and All Wheel Drive Utility Vehicles
2. Specialty High Rail Work Vehicles (Less Than 21,000 lbs.)
3. Specialty High Rail Work Vehicles (More than 21,000 lbs.)

Railroad Work Equipment Vehicles

4. Railroad Work Equipment (Tampers, Ballast Regulators, etc.)

We will design specific inspection and maintenance plans for each of these four groups in order to maintain the referenced vehicles in Good Working Condition according to the Engineering Services Standards.

Inspections

We will maintain current all appropriate permits, registrations, inspections, certificates, licenses, etc. relating to the operation and maintenance of non-revenue vehicles and work equipment. All non-revenue vehicles and work equipment used by us or MBTA will be properly registered. Registrations will be made with the appropriate local, state and/or federal governing agency and maintained current at all times. The Fleet Administrator will provide, and keep up-to-date at all times, inspection stickers of all vehicles.

The inspections will be documented using a standardized inspection form and be performed by our equipment and/or automotive engineer with an MBTA representative. The results of the

inspection will be entered into the Commuter Rail IT Environment. The template for this inspection form will be submitted to the MBTA no later than 120 days after NTP.

Non-Revenue Rail Vehicles

At the very least, each Non-Revenue Rail Vehicle regulated by the Department Of Transportation will receive:

1. A daily operator's inspection prior to use
2. A monthly inspection by the operator, including a report to the Automotive & Work Equipment Fleet Administrator
3. A monthly interior and exterior cleaning, or more frequently as directed by the MBTA, provided by private local businesses licensed and permitted for such activity.
4. Random checks by the managers on field or upon request
5. An annual inspection by a certified DOT inspector (in house)
6. A seasonal inspection in spring for winter equipment (snow plows)

In addition, each non-revenue rail vehicle will be maintained by us in accord with all applicable state and federal codes, laws and regulations. We will maintain all vehicle permits, registrations, inspections, including proper registrations and maintain the inspection stickers,

All Hi-Rail vehicles will be maintained in accordance with OEM Specifications and will be inspected for safety at least annually, in accordance with FRA 49 CFR 214.523.

All drivers of Non-Revenue Rail vehicles will be required to hold a motor vehicle driver's license of the proper class for the type and weight of vehicle being driven. Those vehicle operators requiring special "hoisting-engineers" license, will also be required. Any Personnel involved in three or more accidents in any three year period in MBTA-owned non-revenue vehicles will be barred from driving such vehicles.

Each year, the Human Resource Director will ensure that each vehicle operator's license is reviewed at the appropriate level to ensure that each license is still valid. Appropriate drug and alcohol testing will be conducted at the same time. We will also ensure that any of our motor vehicle operators who have received a DWI are immediately disqualified from driving or us, or any driver who has had more than three accidents in any three year period. A copy of this annual review will be submitted to the MBTA for its records.

Generally, all inspection and permits records will be kept by the vehicle fleet administrator.

Railroad Work Equipment Vehicles

At the very least, each Railway Work Equipment vehicle will receive:

1. A daily operator's inspection prior to use
2. A weekly inspection by the Work Equipment repairmen
3. A monthly inspection by the Work Equipment repairmen or foremen when on standby
4. A seasonal inspection in spring for winter equipment
5. Random checks by the managers on field or upon request
6. Periodic Preventative Maintenance Shopping as dictated by OEM Manuals, condition assessment, or common-sense.
7. An annual fall inspection

Maintenance

Levels of maintenance will be in accordance with manufacturer's standard recommended maintenance instructions unless governed by other special conditions.

We will be cautious to the aspect of public image, including without limitation, the general appearance of the non-revenue vehicles and work equipment. We will not apply decals, bumper stickers, or other materials not related to the Agreement Services to any surface on non-revenue vehicles and work equipment. We will remove all such materials immediately upon discovery or notification by the MBTA, including graffiti.

Non-Revenue Rail Vehicles

The non-revenue rail vehicles may be maintained by a contractor or the MBTA's own or contracted maintenance services, in accordance with all applicable state and federal codes, laws and regulations.

Railroad Work Equipment Vehicles

We will maintain and repair the Railroad Work Equipment at the West Cambridge Work Equipment Facility or the MBTA's own or contracted maintenance services, in accordance with all applicable state and federal codes, laws and regulations.

Fuel Usage Reporting

We will provide to the MBTA an annual fuel (diesel and gasoline) usage audit report covering any and all maintenance of way fueling stations and our issued fuel credit cards. The report will indicate monthly consumption information by fuel type, vehicle number, and average miles per gallon, vehicle operator, and location of fueling operation, gallons filled during each transaction. We will submit, within 90 days of NTP, an initial report form to the MBTA for approval.

Innovations

1. We will commit to purchasing, or leasing, as many sedans and all-wheel drive vehicles using fuel-saving hybrid technology as budgets and state of the art will allow; we will actively seek safe vehicles with extended miles per gallon capability.
2. Non-revenue vehicles will be equipped with advanced GPS Tracking Hardware. We will use a Fleet Management Software providing extended activity and maintenance report, idling time, alerts and fuel consumption monitoring.
3. Every year, during the life of the contract, the Chief Financial Officer will review the following factors about highway vehicles:

- Annual Miles Driven
- Proportion of Annual Miles used in Commute Status
- Annual Fuel Consumption
- Annual Cost to Operator

The Chief Financial Officer will prepare a highway vehicle status report that recommends adjusting the fleet size based on this analysis.

5.A.5. Conducting Surveys and Track Design and Construction Inspection

Moving forward together, we will provide survey, track design and construction inspections as requested by the MBTA. Our Technical Engineering Department will maintain a qualified surveyor who will be responsible for all civil survey of track and turnouts on the Service Property. We will ensure that all track design is in accordance with MBTA's MOW-1 and AREMA standards.

Survey Team

Our Technical Engineering Group will maintain a qualified surveyor who will be responsible for all of the civil surveys required for the proper design and installation of modification or additions to the track structure and to turnouts.

Track Design

We will have a Professional Engineer sign all new track and switch designs before construction is allowed.

Construction Inspections

Construction is new construction or the out-of-face replacement of major components of the track structure and associated appurtenances from sub-grade to the top of rail, including drainage structures. It will always be our goal to complete construction projects, or to inspect 3rd party contractor projects, to the best industry practices and tolerances. While this may not always be practical given such variables as manufacturing limitations, existing conditions and the relaying of materials, we will endeavor to maintain our designed construction tolerances.

- In conducting new construction inspections, we will compare our measurements with the standards in MS-1 and AREMA

5.A.6. Maintaining Freight-Only Track and Unused Rights of Way

We will perform routine inspections, maintenance of track and appurtenances to FRA Class 1, appropriate bridge and structure maintenance, vegetation clearing and emergency work as required on freight only tracks. We will perform safety and security functions on an as-needed basis for all freight-only tracks and any unused rights of way maintained by the Authority.

5.A.7. Integrating New Technologies and Work Practices as Introduced by the Operator or the MBTA

The Technical Engineering Department will be in charge of providing, testing and implementing improved materials, tools and equipment, developing new technologies, work practices and skills, for any Engineering Department activity. Those improvements and proposed improvements will be incorporated of the Engineering Services Joint Performance Improvement Program, discussed and shared with the MBTA Chief Engineer or his/her designee.

5.A.8. Enforcing Third-Party Warranties

We will develop, as part of our Material Management and Purchasing initiative, a third-party warranty tracking system. The Material Management and Purchasing software, operating in our IT environment will enable the:

- Tracking of serialized components
- Placement of an Internal "Flag" and Warranty Dates for Warranty Tracking.
- Use of a specific sub-set of Repair & Return Part Control Tags called a Warranty Defect Card
- Use of Field Service Reports
- Automatic updating to Accounts Receivable
- Report Generation summarizing monthly 3rd Party Warranty Activity

The acquisition of fielded Engineering Components from New Signal Houses, to a Ballast Regulator to a new HVAC system in a maintenance building requires a specific sub-system of the Material Management and Purchasing System to track the maintainable components during the warranty period. Typically, these warranties come in three types:

- Original Equipment Manufacturers (OEM) will usually warrant new systems and sub systems for a period of five years for steel structural components to two years for most non-structural components.
- Repair and Return vendors will have a warranty of less than two years, often from 30 to 90 days. The warranty periods of the R&R vendors tend to be flexible and are developed during the Purchasing Departments negotiations before a contract is signed.
- Bulk Material Suppliers often warranty their stuff for 30 days or less

We will assign a staff engineer, reporting to the Chief Engineer to be in charge of third party warranty administration for the Engineering Department. This management position will coordinate daily the Material Management and Purchasing Department. Specifically, the Warranty Administration Engineer will:

- Establish and Maintain an internal labor rate for warranty work - usually to remove and replace the defective component and transport it to the Material Management and Purchasing Department
- Ensure that a discrete Warranty Parts Control tag is attached to the defective part
- Prepare a Field Service Report (FSR) which details the number of the Warranty Parts Control tag applied to the defective component, the specific nature of the defect, the estimated operator costs to remove and replace it, and the serial number of the part that was installed as a replacement part.
- The Field Service Report is then sent to the vendor who signs it and returns it to the Warranty Administration Engineer. The vendor's signature indicates that the vendor is accepting the costs for both the labor charges and the cost of the replacement part. Note that

vendors may choose to supply a replacement cost at no cost to the Operator or the MBTA

- The Warranty Administration Engineer then forwards the signed FSR to the Operator's Accounts Receivable Department, who will bill the vendor for the cost of the labor and replacement part.
- The operator's material management function will produce a monthly report, containing but not limited to year-to-date data on:
  - Number of Field Service Reports Issued
  - Number of Outstanding Field Service Reports
  - Amount of Third - Party Warranty Claims Billed and amount of reimbursement Received Year-to-Date

It should be noted that this introduction to Third-Party Warranty Administration will be greatly amplified in Warranty Control & Administration which is due 90 days after NTP.

5.A.9. Maintaining a Comprehensive and Up-To-Date Inventory Control System

Assessment of the Current Conditions

Currently the Material Management function within the Engineering Department is not properly organized. Our overall approach will be to have four separate sub-sections to our Material Management and Purchasing system installed in the Engineering Department:

- Track and Structures
- Communication and Signals
- Bridges and other large civil structures
- Buildings and Internal Installed Systems, i.e., HVAC, Electrical, Etc

Materials Management

Materials Management Policy

For any of the previous activities, the Engineering Services Department will manage the purchase, storage, security, disbursement, control and disposal of all Support Property and Support Inventory necessary to perform the Agreement Services.

Material Management is part of the "Support Oriented Processes", as previously described in the Engineering Services Processes chart. This process will optimize efficiency and inventory value through forecasting of replenishment requirements as well as control of all phases of the materials handling function.

The Materials Management Plan, consolidated from the Production Departments' data by the Technical Engineering Department, will ensure that adequate levels of critical inventory are maintained without any interruption in availability.

A list of critical material will be developed in order to determine necessary stocking levels and secure the railway system operation. This process will optimize intervention times to enable repairs to be made in a minimum of time in the event of a sudden failure or incident with a critical or unique component (e.g. long lead-time items). A safety stock will be consequently considered and its use formerly regulated by a specific process.

The Commuter Rail IT Environment will be used to monitor levels of material and inventory.

Storage & Handling

All material, except for low value consumables (i.e. hardware, some cleaning materials, etc.) and common use hardware will be kept in secure storage areas in order to minimize the incidence of undocumented consumption, hoarding, pilferage and other modes of undocumented inventory depletion. This includes outdoor storage of maintenance of way and other large, durable or slow moving material. Requests for exceptions to this policy will be subject to prior written MBTA approval.

We will ensure that Support Property and Support Inventory are stored only in areas approved by the MBTA, and will keep the material yards and any other storage facilities neat and in an orderly fashion at all times. All surplus materials or quantities above the minimum needed for routine maintenance shall be stored at the material yards unless otherwise approved by the MBTA.

Replacement rails will be neatly stacked in accordance with AREMA standards at MBTA

approved locations. The proposed rail storage locations will be part of the rail replacement plan.

Support Property and Support Inventory will be properly handled and protected to prevent damage, ensuring adherence to any OEM recommended storage requirements.

Storage & Handling will comply with the Applicable Law concerning hazardous solid and liquid materials, as well as scrap and waste material management regulations. Oil, engine coolant and any other waste or hazardous material effluence will be captured, labeled and disposed in accordance with environmental regulations.

Bulk fuel used for work equipment will be stored and handled in compliance with all state and federal regulations, as well as in accordance with all applicable Spill Prevention Control and Countermeasures Plans.

Physical Inventory, Valuation, Audit and Scrapping

An annual inventory will be conducted by the Engineering Services Department.

Obsolete, surplus and scrap support property and support inventory will be identified during the annual physical inventory and a specific report will be issued for approbation from the MBTA. The obsolete, surplus and scrap support property and support inventory management process will include the Authority's requirements regarding proceeds of sales, as well as escrow account provision, reports and credit.

Full cooperation will be provided to the MBTA for any support inventory valuation, physical inventory and audit.

Inventory Maintenance Plan

The Inventory Maintenance Plan will be part of the Engineering Services Plan. It will detail the amount and location of inventory required to maintain the Service and Support Property, including a three year forecast, as well as the minimum and maximum levels of each item. The Inventory Maintenance Plan will be subject to the MBTA's approval, as well as the ESP.

A monthly meeting will be convened amongst Engineering Services material management staff:

- To review the actual levels of critical material list
- To review and act upon the status of each item on the none-on-hand material list
- To update - if necessary - the Inventory Material Plan
- To discuss and improve material management process

A special "Work In Progress" follow-up report will also be provided, describing the ongoing ordering processes, priority treatment required and lead time issues.

The MBTA staff will be invited to these monthly meetings, and get the monthly reports copies.

Quality of Materials

Support Inventory to be used in the Agreement Services will be first quality products and conform to OEM specifications and comply with all local, state and federal regulations. If OEM specifications are not available, then other appropriate specifications or standards (e.g. American Railway Engineering Standards, AREMA, or others) will be utilized, unless otherwise specified by the MBTA.

We will acquire Support Inventory that is identical to and interchangeable with parts, material, circuits, logic, ergonomics and dimensions on the existing Service Property, unless otherwise specified.

Materials Management Information System (MMIS)

We will participate in the development, implement and administration of a Material Management Information System Plan so as to use the Commuter Rail IT Environment to monitor and control materials management activities. These activities will include, but not be limited to, maintaining an inventory of all existing materials and parts; optimizing stocking of materials and parts; calculating the costs of materials and parts used for work orders; controlling the ordering of materials and parts; and tracking specific

materials, including materials for Supplemental Work Projects, serialized components, budgets and project costs.

5.A.10. Completing and Undertaking Supplemental Work Projects, Including Projects in Progress by the Previous Contractors

Capital Works and Improvements Department

The Capital Works and Improvements (CW&I) Department will be in charge of undertaking and completing supplemental work projects, including projects in progress by the previous contractors. This group will identify the universe of current and planned capital projects (including a 3 year work and material forecast), oversee and manage all capital projects on the property, and provide third party coordination and support functions, including managing flag protection services as required to ensure the safe and efficient completion of projects. All projects will be prioritized based on criteria provided by the MBTA and the Chief Engineer or his/her designee. Management and control of the work will be accomplished by utilizing a computerized work-order system.

CASE STUDY: ENGHIEN-LES-BAINS Station Renovation & Modernization, Passenger Accessibility

Project Description

The Enghien-les-Bains train station services the suburban mass transit network north of Paris, accommodating more than 10,000 passengers daily.

$10.5 million - with funding provided by local and regional government, Paris public transport authorities and SNCF - is being invested in station upgrades and modernization.

The objective: improved access for visually impaired passengers and passengers with reduced mobility (the disabled, the elderly, and passengers with baby strollers or rolling suitcases...) to the main hall, train platforms and underground walkways.

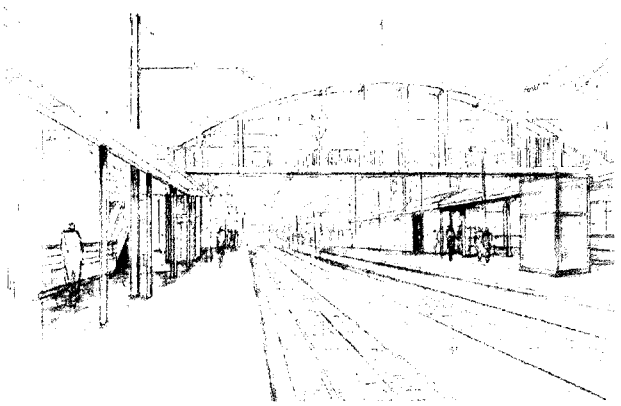
The project was launched in April 2013 and is expected to take 18 months to complete.

SNCF Expertise

As project manager, SNCF Infra is coordinating and implementing the following renovations and upgrades:

- Installation of automatic sliding doors at station entrance/exits
- Wider hallways and ramps to accommodate wheelchairs and strollers
- Installation of two elevators to service train platforms and underground walkways connecting the platforms
- Raised platforms to facilitate train access for all
- Ticket windows adapted to wheelchair access
- Improved lighting, new passenger address systems, clearer signage and sound beacons to guide the visually impaired
- Modernized, easily accessible toilets for the disabled
- Upgraded staircases with double railings, anti-skid coating and contrasting edges to clearly indicate steps
- Night time direct access ramp connecting the adjacent bus station to the train station
- New waiting area near the disabled access on platform 2

CASE STUDY, continued: ENGHIEN-LES-BAINS Station Renovation & Modernization, Passenger Accessibility



Optimization and Capitalization

During the multi-phase renovation project, the station will continue to service passengers, and station shops and ticket windows will remain open for passenger convenience. To limit interruptions to train traffic for mass transit commuters, platform renovation and construction will be undertaken at night.

SNCF Infra expertise in this area brings added value, with only two scheduled traffic interruptions: July 20-21st 2013, and August 31st - September 1st 2013. Real time traffic updates will keep passengers informed as work progresses.

Project Benefits

There are two main benefits:

- More convenient station access for all passengers, bringing the station into compliance with current standards and norms for the disabled. (The train which services Enghien- les-Bains is fully accessible to passengers with reduced mobility, with automatic ramps connecting the train to the platform.)
- Safer, easier and more comfortable travel for all thanks to clearer signage, sound beacons, improved lighting, modernized toilet facilities and a new waiting area on platform 2.

SNCF Infra maintenance and renovation know-how supports station upgrades, using innovative techniques and night time works schedules to continue servicing passengers for the duration of the project.

Construction Support

Capital Project Support

MBTA Capital Work

Concerning design and construction work performed by Other Contractors on and adjacent to the Service Property (the "MBTA Capital Work"), we will furnish construction project support for the MBTA Capital Work. Construction Support will be funded wholly through the Capital Support Allowance as defined in the RFP, or as Supplemental Work for amounts required in excess of the Capital Support Allowance.

Construction support will be mainly provided by the Capital Works and Improvement Department. It will include some or all of the following functions:

- Flag protection for Other Contractors' employees and project equipment related to MBTA Capital Work.
- Engineering reviews of plans and specifications submitted in connection with MBTA Capital Work.
- Flag protection, service diversion planning and staffing, to address any situation that in any way may have the potential to disrupt service or create an unsafe condition and signal engineering support for all signal system modifications and for all cutovers and testing.
- Signal cutovers and testing as needed to ensure proper operation, utilizing qualified signal personnel and signal engineering support

for all signal, electrical, and communication system modifications and for all cutovers and testing.

- Training of Operator Personnel, MBTA staff and Other Contractors' employees as necessary to safely allow continued or expanded use of the Right of Way. This training includes but is not limited to: operating and physical characteristics for train and engineering personnel, dispatchers and maintenance of way forces. The training also includes transportation, coverage and back filling of positions and any other issues that need to be resolved so that employees are available to receive training.
- Project management services to support MBTA Capital Work, including estimating and scheduling, including attendance at meetings as required by the MBTA.
- Flag protection, service diversion planning and staffing and other support for MBTA Capital Work. The type of capital work that typically requires this support includes but is not limited to: refurbishment and/or replacement of moveable and fixed span bridges, track construction, electrical and signal cutovers, grade crossing installation, station construction, and other projects that may require or benefit from approved Service Disruptions.
- Inspection and acceptance of work by Other Contractors.

We will include all anticipated MBTA Capital Work support and the resultant operational, engineering, flag protection and other support functions necessary to support such project work in the development of our Annual Engineering Services Plan.

We will prepare and maintain records detailing the cost of Construction Support. We will inform the MBTA, in writing, immediately once we have earned eighty percent (80%) expenditure level of the Capital Support Allowance. Payment for Construction Support services shall be in accordance with the RFP.

Capital Works and Improvements Management

Moving Further Together, our partner, HNTB Corporation, will help us manage the MBTA Capital Works and Improvements, in full transparency with the Authority.

CASE STUDY: HNTB Corporation – The Fitchburg Mainline Improvement Project

The Fitchburg Mainline Improvement Project

HNTB is leading the design and construction efforts for the $150+ Million Fitchburg Mainline Improvement Project. The goal of this project is to turn the commuter rail line with the poorest on time performance into the line with the best on time performance and reliability. This will be accomplished with significant upgrades to the signal system, installing new interlockings, curve modifications resulting in increased speeds, adding new high-level platforms, repairing bridges, upgrading grade crossing advance warning devices and installing over 10 miles of double track. Once complete, the schedule will be reduced by over 10 minutes for a 60 minute commute – a significant time savings.

As the initial project scope was being defined and preliminary cost estimates prepared, additional funding sources became viable options. HNTB worked closely with the MBTA to develop a strategy that would yield the most grant funding approvals. The result was a success.

A new universal interlocking was immediately broken out from the overall project scope, submitted for funding and received approval. This project included track realignment, signal upgrades and MOW trackage. The design package was fast tracked to meet the aggressive funding application schedule and construction was completed by the operator.

CASE STUDY, continued: HNTB Corporation – The Fitchburg Mainline Improvement Project

Additional funding was applied for and obtained for the double tracking portion of the original scope. The segment of work included items too complex for force account services as well as scope items ideal for the current operator's forces. HNTB prepared the track, signal, civil, and utility plans to a force account level of detail in another fast tracked design schedule to meet the required completion construction schedule. The more complex new passenger stations were packaged separately and put out to completive bid. A bridge package was also prepared and put out to completive bid. Not only did these individual design packages provide the MBTA with the best value, the separation allowed the overall project schedule to be maintained. While the force account package was being procured, the station designs were advanced through the communities public comments phase. This construction is currently winding down and HNTB is preparing the as-builts per project closeout procedures.

The remaining scope of the project was by far the largest and most complex segment. This package includes work over the entire line and involves coordination between active contractors. With the magnitude of reconstruction slated, service outages are required. HNTB worked diligently with the MBTA to develop outage schedules limiting passenger disruptions.

Throughout the entire process, HNTB worked to develop project scopes, project estimates, prepare grant applications, handled all environmental permitting, attended regular project update meetings, and provide CPS services. We will lead the Fitchburg Improvement Project to successful completion and are confident we would be an important asset for any future supplemental works projects.

5.A.11. Performing Environmental Services, including the Operation, Maintenance and Service of all Environmental Systems Located Throughout the Service Property

Our Environmental Policy is further described in Section 8 – Management Plan. We will operate, maintain, and service all environmental systems located throughout the MBTA service property, and, with the assistance of subcontractors, furnish all labor, materials, tools, and equipment to operate, test, service, maintain, and repair the MBTA's environmental systems as described in the Agreement. The Engineering Services QHSE Manager will be specifically responsible for the environmental services, including the operation, maintenance and service of all environmental systems located throughout the service property and their compliance with the company's Environmental Policy.

5.A.12. Maintenance of All Environmental Permits, Certificates and Licenses

We will comply with and maintain current all appropriate permits, certificates, licenses, etc. for all work and property. We will ensure that all permits, certificates, and licenses required for the effective management and compliance of Service Property, Support Property and systems and facilities under this contract are processed in a timely manner. We will complete periodic inspections and reporting necessary to maintain all environmental permits, certificates. Reporting will consist of quarterly reports for NPDES Permits, Storm Water Prevention Plans, Spill Prevention Control and Countermeasures Plans (SPCC). Our Environmental Team will procure permits, certificates and licenses that can be obtained only in the Keolis or Environmental Subcontractor's name, to pay all charges, fees and taxes, and give notices necessary, and will fully corporate with the MBTA to secure any

permit that must be made in MBTA name or as joint application.

Within thirty (30) days of NTP, our Environmental Team will submit to MBTA for review and approval, a draft Emergency-Spill Response/ Spill Prevention Control and Countermeasure (SPCC) Plan, including a chain of command for each applicable Service Property location. A final Emergency Spill Response/SPCC plan for each facility will be adopted within ninety (90) days of NTP. This plan will be updated on an annual basis and provided to the MBTA by July 1st of each Contract Year thereafter.

Within thirty (30) days of NTP, Our Environmental Team will submit to MBTA, for review and approval, a draft program to manage the transfer, updating and record keeping for all permits, licenses, and certificates including a plan for integrating GIS SaaS tools. The final program will be finalized and implemented within ninety (90) days of NTP at which time the SaaS platform including PeopleForms and OnlineMap will be completed and running.

The Mobilization Plan will include a listing of all required permits and a schedule for transferring those permits into Keolis name. Applicable permits will be transferred to us prior to the Commencement Date. We will be responsible for any and all costs associated with the transfer of permits.

Individual Plan Descriptions

We will develop an Environmental Plan, which will include but not be limited to, spill prevention and control, hazardous materials, medical waste handling, hazardous materials or waste generators. The policies set forth in the plan will be developed in compliance with all applicable local, state and federal environmental laws and regulations.

We will have a draft Health and Safety Plan (HASP) prepared for environmental work that is anticipated during operations. The purpose of the HASP is to identify environmental hazards associated with a project and specify engineering and administrative controls and personal protective equipment necessary to mitigate the risks associated with these hazards. The HASP also assigns responsibilities for the implementation of safety programs on this project and defines training, monitoring and emergency response planning specific to the project.

5.A.13. Proper Disposal of Any Waste or Hazardous Material

Hazardous Waste Management

The proper handling of hazardous waste includes the use of proper containers, marking, labeling, storage spill containment and response, transportation for disposal, and accurate record keeping. This process is highly regulated by federal, state, and local laws. When control procedures and equipment fail and hazardous substances are released, a completely different set of requirements must be met. The MBTA currently has an EMS program in place for the existing facilities.

Waste Minimization and Pollution Prevention Programs

There are opportunities to provide waste minimization or source reduction plans to control the types and quantities of hazardous materials used. These programs have additional benefits in reducing inventories, reducing the amount of training and personal protective equipment supplied to employees, and limiting risk of serious injuries and environmental cleanup from spills and leaks. The economic benefits from waste minimization programs also apply to solid wastes.

Energy Use and Management

We will support the MBTA efforts in conducting energy and water conservation audits on buildings and facilities. These audits shall be conducted regularly to identify, analyze, prioritize, and budget for energy and water conservation opportunities. We will implement conservation methods proposed and monitor results of such measures.

Environmental Training and Health & Safety

A Health and Safety Plan (HASP) will be developed for all the personnel working with and or exposed to hazardous or other contaminated materials as part of their work. A copy of the plan shall be submitted to the MBTA within thirty (30) days of NTP. The HASP shall follow the guidelines as contained in 29 CFR 1910. We shall ensure that work area security is a part of the Plan to prevent inadvertent access to the work area by unauthorized and/or unqualified persons.

Training and Qualifications

All personnel executing Environmental Services under this contract will be qualified to perform the services. Our Environmental Team personnel who work on the Service Property executing Environmental Services will be trained in compliance with applicable regulations as required by OSHA, DEP, and EPA. These include OSHA regulations including, but not limited to, 24-Hour HAZWOPER, Right-to-Know, Lock Out/Tag Out, Confined Space Entry, and Personal Protective Equipment as applicable and as required by OSHA. In addition, personnel who work on the Service Property will be MBTA ROW Safety certified Roadway Worker Protection certified.

Emergency Response

Our Environmental Team will be prepared to respond to spills and environmental emergencies at all times. Emergency response will be planned for all contingencies with all participants' roles and responsibilities outlined. Our Environmental Team will facilitate planning procedures for emergency response through the GIS interactive platform designed to make information available to all Operating Managers. Our Environmental Team will have personnel and equipment needed to respond immediately in the event of uncontained releases of hazardous materials to assist in containment, and shall also respond to emergency environmental services requests by MBTA or our Operating Managers.

A layered leadership team will be established for environmental emergencies at the local and regional operations level to coordinate the appropriate on-scene responses. After initial notification of incident, Our Environmental Team will:

- Quickly evaluate the emergency situation
- Develop a response plan and a site-specific health and safety plan
- Dispatch the proper personnel and equipment
- Arrange for on-site delivery of required goods and materials
- Notify the appropriate governmental agencies
- Initiate appropriate paper work
- Provide on scene coordination and direction
- Provide overall project management to perform hazardous materials response work in compliance with applicable federal, state and local laws and regulations.

Remediation

Our Environmental Team will be highly experienced in the cleanup of contaminated sites as required through the Massachusetts Department of Environmental Protection (MassDEP), Federal Superfund and RCRA Corrective Action programs. The team will have combined experience and leadership skills with the Massachusetts Contingency Plan and its requirements which helps minimize cleanup impacts and expedite site remediation. The remediation process, to the extent practicable, will be executed using Green Sustainable Remediation (GSR) technologies.

Storm Water and Wastewater

A rail system of the size of MBTA requires that a Master Plan be in place for proper operations and tracking of wastewater and storm water operations, maintenance, and compliance. We will engage the necessary expertise and network of supporting vendors for the installation, operation, and maintenance of all systems, as well as studies, wastewater collection, characterization, management and disposal, stormwater collection characterization (if and when required), treatment, and disposal, as well as support services and activities to maintain and improve the systems in place.

Environmental Impact – Public Outreach

We will assess opportunities for improvement of the environmental profile of the commuter rail operation, by examining the operation, to determine where changes can be made. We need to improve our footprint and then let the public know about the steps we are taking to improve. We will build on the communications strategy MBTA currently has in place, and position ourselves as the green alternative to automobiles.

Maintenance of Environmental Systems

We will be responsible to test, operate, maintain and service various environmental systems located throughout the service property, or to engage and oversee a qualified environmental specialist to do so. Some of the tasks involved include Tank System Servicing, Oil/Water Separator System Servicing, Storm Water Inspections, and the servicing of Subsurface Disposal Systems We will ensure that maintenance records are properly maintained. We will have specialists on call to respond in the event of uncontained releases of hazardous materials, to assist in containment as well as to implement any emergency environmental actions required.

Environmental Systems – Rapid Repairs

In order to maintain efficient operations, our Environmental Subcontractor will ensure:

Immediate response action upon becoming aware of a malfunction or to requests by the MBTA for emergency repairs to environmental systems.

Maintain spare parts in order to expedite repairs to environmental systems, and associated equipment and appurtenances whenever possible.

Maintain an up-to-date inventory of tools and parts recommended by the equipment manufacturers of the various environmental systems serviced under the Environmental Specifications. As part of this contract, a copy of the inventory and spare parts and tools will be provided to the MBTA and maintained at each facility and/or at Our Environmental Team's local office or service facility.

Use new parts to make repairs and/or replacements to the MBTA's environmental systems.

Land Management and Stewardship

Land management and stewardship is important to the maintenance and perception of rail transportation corridors for future transportation uses. Our Environmental Team will ensure that EMS programs are in place and include ensuring that maintenance activities such as maintaining drainage across railroad corridors, maintaining bridges/trestles are done in an environmentally friendly manner, utilizing best practices. Our Environmental Team will seek opportunities to improve upon the existing EMS by implementing a GIS monitoring and reporting system to support the sustainable practices for Land management and stewardship.

5.A.14. All Other Services Related to Compliance with Applicable Environmental Laws and Regulations

The commitment and communication are key to the successful implementation of environmental strategy. During the transition and mobilization period, the Environmental Team and MBTA Management Team will establish and define communication protocols and relationships.

Under this contract Our Environmental Team will assess the opportunity to automate the process of management, monitoring and reporting of all Environmental Services under this contract in support of advancing the existing EMS and MBTA's sustainable goals.

Aspects of the Commuter Rail IT Environment

To achieve this goal, Our Environmental Team will utilize the expertise of PeopleGIS to assist in the design and implementation of two web-based Software-as-a-Service (SaaS) platforms to provide a strong foundation for information management; MapsOnline and PeopleForms. Both SaaS platforms will be licensed to MBTA on an annual basis and be available to all key

staff wherever they have access to the internet. All users will need to leverage either of these platforms as an internet device, such as an Android or iPad tablet, desktop computer, or smart phone, and an Internet browser.

Our Environmental Team believes that this level of access to information will increase efficiency drastically in support of sustainable practices and provide staff with the contemporary tools they need to redefine the role of information on daily, weekly, monthly, and annual tasks as well as save time by instantly documenting field work. Access to data will be controlled through usernames and passwords, thus enabling our Management Team to define the type of editing capabilities and key staff access to every application deployed.

MapsOnline is a fully customizable web-based mapping program, which will eventually contain all MBTA-specific mapping layers. Mapping layers will include the obvious MBTA rails and stations. However, the true value of MapsOnline will be more evident when the less obvious layers are added, such as catch basins, manholes, wildlife crossings, onsite treatment systems, parts storage locations, oil & water separators, underground storage tanks, and more. Several MapsOnline sites will be created to support operations, each with certain mapping layers and links to information designed to meet the needs of a particular set of users, whether those users represent stormwater system inspectors, crew managers, project managers, or emergency operations staff.

PeopleForms is a fully customizable web-based data management platform. Built on an SQL environment, PeopleForms will enable Our Environmental Team to build dozens of web forms capable of supporting field inspections, inventory tracking, activities tracking and scheduling, facilities management, and other activities. When necessary, data in PeopleForms can be mapped in MapsOnline. One example would be to show all of the catch basins scheduled for cleaning in the first quarter of the year. Because MapsOnline and PeopleForms were built to share information, the ability to map data captured in PeopleForms and the ability to add maps to forms created in PeopleForms will enable our Project Team to design tools for project staff that truly meet their needs.

Phase I: Needs Assessment and SaaS Implementation

During the mobilization period, Our Environmental Team will review all available mapping layers that MBTA may currently have, such as: Catch Basins, Storm Water Outfalls, Manholes, Utility Networks, and others. Missing mapping layers will be documented and entered into our spreadsheet for compilation. If mapping layers do not exist, they will need to be mapped. PeopleGIS project team has estimated the time it will take to map these locations, and we have assumed that Environmental Team will use project staff for such field work.

Phase II: Implementation

MapsOnline sites and PeopleForms applications will be implemented in order of priority over the following several months. Forms and mapping layers will be available online for peer review constantly as they are being developed. Another form called "Review Comments" will also be available for all reviewers to use to document their comments. Comments entered into the Review Comments form will be immediately emailed to the development team for their consideration. The development team will be composed of Environmental Team and MBTA Management Staff.

Sustainability Approach: Transit Operations and Maintenance

In May of 2012, the MBTA signed the American Public Transportation Association (APTA) Sustainability Commitment Pledge. With this pledge, MBTA has committed efforts to strategically incorporate agency-wide the core principles:

- Making sustainability a strategic objective
- Identifying a sustainability champion within the organization

- Establishing an outreach program on sustainability for all staff
- Undertaking a sustainability inventory of the organization based on the following indicators for transit agencies:
  - water usage
  - criteria air pollutant emissions
  - GHG emissions and GHG savings
  - energy use (electricity, fuel)
  - recycling levels/waste
  - operating expense
  - unlinked passenger trips per capita in service area of operation
  - VMT per capita in service area of operation

The MBTA has committed to advancing an organization-wide sustainability plan for which has begun to establish programs and goals. Our Environmental Team will provide the necessary support to the MBTA management team in identifying opportunities to advance the sustainability goals. These opportunities include operational efficiency through the use of automating environmental processes, use of renewable energy, energy efficiency, pollution prevention, hazardous materials management, waste reduction and recycling, and responsible purchasing, amongst other. Our Environmental Team will analyze:

- MBTA EMS programs to define strategic objectives towards achieving ISO 14001
- Develop a systematic, comprehensive framework for approaching and improving
- Programs, to become sustainable
- Life cycle of environmental services program to seek opportunities for improvement
- Support MBTA's objective to build and strengthen image as an environmental leader
- Policies, programs and organizational management
- Put sustainability on the agenda of regular staff meetings
- Establish an employee recognition program for contributions to the organization's sustainability efforts for example: EcoChamp of the Year Program
- Put in place a sustainability hotline for employees and the general public
- Define a slogan that incorporates the sustainability vision and incorporate in all communications
- Integrate sustainability into employee and Environmental Team performance management
- Put in place a sustainable procurement policy and/or supply-chain policy that is based on comprehensive sustainability principles
- Become viewed as a sustainability leader in the community by playing an active role of partnering in established community programs
- Establish a chief sustainability officer or equivalent post within the transit agency or organization.
- Establish a climate action plan for the agency including adaptation strategies addressing changes such as sea level rise.
- Create an internal marketing group or work with a private firm to develop a marketing strategy.

Green Procurement for Maintenance and Upgrades

- Establish a green purchasing policy for purchase of products and leasing/purchase of equipment - to address energy use, recycled content, transport distance, and recyclable packaging.
- Consider application of life-cycle assessment (LCA) processes to equipment, product and vehicular procurement, understanding that a realistic starting point and timeframe applicable to each specific LCA must be agreed upon and consistently applied.
- Create an inventory listing of prohibited and limited-use chemicals, and include the inventory in the transit agency's environmental management system audit and continual improvement programs. Include a procedure that allows for research and approval for use of alternative products to reduce the inventory of limited-use chemicals.

- Establish minimum "green" qualifications for designers of renovations, specifiers and purchasers.
- Utilize standard environmental labeling programs for specifying products.
- Put in place procurement methods that require (or favor) sustainable practices for at least one product line or area.
- Identify and purchase office supplies that make use of recycled products or have other environmentally friendly attributes.
- Research, access and participate in state- or regional-level databases for reused and recycled materials, such as that held by the California Integrated Waste Management Board
- Participate in multi-agency requests for proposals (RFP) programs, thereby increasing leverage and encouraging sustainable approaches and reducing cost.
- Paints, solvents and cleaners
  - Utilize low-VOC and water-based paints and solvents.
  - Develop a solvent reclamation program
  - Specify nontoxic cleaners whenever possible.
  - Manage procurement of cleaning supplies on a regular or computerized schedule to reduce shipping and stock waste.
- Refrigerants, oils, engine coolant and batteries
  - Specify nontoxic materials whenever possible.
  - Reduce refrigerant, oil, engine coolant and battery waste products by recycling or filtering for reuse onsite.

Energy and Resource Efficiency

These guidelines are aimed at reducing energy consumption in transit operations and maintenance, investigating ways to improve energy efficiency and identifying what renewable energy systems might work for various operations and maintenance activities within the system. When appropriate, the guidelines address specific modes, including bus and rail.

Implement energy and water conservation procedures for operations and maintenance

- Reduce water usage at facilities:
  - Capture, treat and reuse vehicle wash wastewater and storm drain runoff instead of potable water in vehicle, equipment and facility wash operations and for irrigation at yards and station campuses.
  - Install water filters at taps in offices and shops instead of purchasing bottled water. Ensure regular replacement of filters.
  - Work with local agencies to promote potential for use of water from dewatering operations, or other treated water of suitable quality to supplement groundwater recharge where geotechnical conditions are suitable.
- Become paperless. Take advantage of electronics and computerized systems to get away from paper-based communications in offices, yards and shops.
- Alter bus operations and routes based on optimized energy usage.

Establish metrics against which service plans are measured to determine if a route is being implemented as sustainably as possible (e.g., passengers per revenue mile, fuel consumption per passenger mile, and other metrics). Computer models are available to do this.

- Use computer modeling of transit operations and passenger loading patterns to optimize stop locations.
- Conduct or participate in an energy audit.
- Tailor preventive and other maintenance to minimize energy usage by automating equipment and vehicle maintenance schedules and developing an efficient maintenance training program. Shop tools and lifts can be also be used more efficiently, in a way that reduces energy consumption.
- Communication-based train control (CBTC) improves the operational efficiency of a train system by allowing trains to be spaced closer together, resulting in more customers per hour. It also helps limit the amount of energy

used because the train will automatically slow down, with a decreased need for energy needed for braking, thus minimizing electrical consumption.

- Install automated on/off switching for auxiliary systems on light rail vehicles. This is especially useful during yard stays, thereby achieving significant savings in kilowatt-hours and energy costs.

Improve energy efficiency of operations and lower peak demand

- Establish energy-saving goals or protocols for operations and maintenance activities, if possible matching state and regional goals. Include staff training on energy and efficiency requirements into operation of vehicles. Right-size vehicles. Establish policies regarding location of meetings, avoiding unnecessary trips.
- Provide operator training to ensure the smooth use of power and to reduce fuel/energy consumption. Reduce fuel usage by reducing bus idle times.
- Utilize energy-saver and hibernate functions on motors and equipment.
- Monitor vehicle fuel consumption. A transit agency's finance department typically keeps track of all fuel being used every day. This department can provide information regarding fuel consumption per bus. Using this information, incentives for the lowest fuel use, individual accountability and a need to use energy responsibly can be established.
- Reduce ownership and operation of nonrevenue vehicles. Consider participating in car sharing organizations such as Zipcar or City Car Share instead of owning a fleet of nonrevenue vehicles. A transit agency, as a major customer, has influence and the ability to leverage car sharing and to encourage car-sharing organizations to use non-fossil or hybrid technologies.
- Utilize telephone or web-based meetings and training sessions whenever possible.
- Install a signal to let vehicle operators or structure occupants know that doors are open to conserve heat/cooling. Be accountable for energy used year by year, and include energy conservation as a performance measure for facility operators and owners/maintainers. Adjust set points for heating and air conditioning to save energy wherever possible. Also, provide controls and procedures to operate facilities with less heating and cooling when not occupied.
- When replacing lighting, use energy-efficient technology such as fluorescent lamps, including both thin tubes and CFLs for tunnel lighting, station lighting, etc., LED lights (in signals, emergency lights, signage, etc.), and induction lighting.
- Use motion sensors and photoelectric dimmers in ancillary rooms and other remote work areas to reduce electricity consumption.
- Use photocells and timers to control exterior lighting fixtures.
- Incorporate advanced lighting control and power regulating system to optimize power consumption.
- Install energy metering specific to facilities. Where individual cost centers have separate metering, they can be held accountable for energy consumption.
- Establish a policy of re-commissioning existing HVAC systems to ensure optimal performance and energy efficiency.

Use renewable energy resources

- Purchase Renewable Energy Credits (RECs). By participating in a state-level or province-level REC program, a transit agency can legitimately claim to use green power, incentivizing carbon-neutral power suppliers and essentially subsidizing power-generating utilities that obtain some or all of their electricity from renewable energy such as solar or wind power.
- Purchase electricity directly from renewable sources or establish percentage targets for renewable energy when issuing large scale electricity contracts

Emissions and Pollution Control

Pollution reduction and prevention requires close monitoring of operations and implementation of environmental policy, as well as training. Training for emergency response for situations such as spills, for example, is normally part of an environmental management system. A transit organization's environmental management system uses management policy, commitments and implementing procedures to set goals; achieve them; and monitor and continuously improve environmental performance.

For MBTA, reduction of pollution and emissions primarily relates to prevention of spills, leaks and air emissions, as well as reduction of waste and the reduction and proper storage, use and disposal of hazardous materials. Where possible, materials purchased should be evaluated to ensure that the least hazardous materials appropriate for the designated use are being purchased. Hazardous materials should be tracked and systematically eliminated from use where possible. As discussed in Section 5.2.1, a green procurement process can be used to track and prevent the purchase of identified hazardous materials.

The reduction of solid waste can be achieved in many ways. Preventing waste and recycling are the most prevalent. Most materials can be recycled or reused. In a transit organization, it is typical to recycle metals, wood, paper, batteries, waste oil, solvents, grease, used oil filters, antifreeze, tires, and electronic equipment, to name a few. Also, at the end of their useful life, vehicles can be sold for scrap or for other uses. From an environmental sustainability perspective, it is important to know the end destination of these recycled products. Green procurement, or environmentally responsible purchasing, is valuable for establishing this type of information in a large organization.

Implement pollution reduction strategies (eliminate, reduce, reuse and recycle)

- Reduce hazardous-waste and chemical usage in all agency facilities through the use of an inventory and criteria for what is to be eliminated, what is to have limited use, and processes to ensure proper management of these wastes and chemicals.
- Establish a system to divert organic waste to composting facilities, where available.
- Establish a reduced idling policy for buses and other revenue and nonrevenue vehicles.
- Introduce methods that extend the life of lubricants.
- Reduce pesticide and herbicide use. Utilize integrated pest management. Refer to the EPA's Integrated Pest Management program at www.epa.gov/pesticides.
- Reduce vehicle wash water use reduction through efficient system design (spray, pressure, reused water cycles). Take care to ensure that recycled water does not contain contaminants such as chlorides.
- Implement waste reduction and recycling programs, such as recycling of railroad ties, electronic devices, lamps and ballasts.
- Document the final destination of recycled products such as motor oil and computer components.
- Divert waste from landfills. Recycle paper products, bottles, cans and compostable materials such as landscape and food waste.
- Keep records of existing hazardous material quantities in stock, and store them in an established, secure on-site location by type as close as possible to where they will be used, along with standard MSDS precautions and spill response supplies.
- Optimize employee travel by using teleconferencing equipment, transit ridership, cycling, walking, carpooling and other sustainable options.

Enhance facility performance and longevity

- Perform regular and appropriate maintenance to optimize quality and longevity of facilities, systems and vehicles.
- Monitor energy use and emissions, and make adjustments to optimize efficiency of systems.

- Research, plan and perform upgrades to optimize efficiencies and to reduce emissions of facilities, systems and vehicles.

Manage wastewater

- Treat wastewater from car-washing system for recycling within the washer.
- Neutralize effluents from car-washing system before they are directed to city sewers.
- Utilize oil-water separator

5.A.15. All Reporting Required by the USDOT, FRA, EPA, MDTE, APTA, FTA and other applicable Laws, Rules and Regulations

Reporting Required Under Applicable Laws, Rules and Regulations

We will provide reporting required by the USDOT, FRA, EPA, MDTE, APTA or FRA and other applicable laws, rules and regulations regarding, but not limited to the following:

- Remedial actions;
- Accident / Incident Notification and Initial Investigation reports;
- Headquarters-assigned rail-equipment and highway-rail grade crossing accidents.

These reports may concern any activity connected with the Engineering Services (signal failure, accident/injury, hazmat release, complaints etc.).

Examples:

- Title 49 CFR 225 - Railroad Accidents/ Incidents: Reports Classification, and investigations
- Title 49 CFR Part 233 - Signal Systems Reporting Requirements
- Title 49 CFR Part 234 - Grade Crossing Signal System Safety and State Action Plans

Signal and Communications (49 CFR 233 - Signal Systems Reporting Requirements)

We will follow applicable FRA regulations regarding investigation and reporting of false proceeds. We will also submit the following reports to the MBTA after every false proceed:

- A preliminary report (ODRL 3.2-063), within 24 hours of the reported false proceed, in electronic format; and
- A final report (ODRL 3.2-064), within 15 days of the false proceed, filed on form FRA F 6180-14, in electronic format.

National Transit Database Reporting Requirements

We will adhere to all reporting requirements regarding the Engineering Services scope as described in the National Transit Database ("NTD") Reporting Manuals.

We will deliver electronically all information required for NTD reporting to the MBTA in the format and with all information required for review by the MBTA and suitable for forwarding to the NTD.

We will provide all reports, records and other submittals required pursuant to the Agreement, within the designated timeframes.

All Reports will be filed and maintained in the Commuter Rail IT Environment unless, in the MBTA's sole discretion, the MBTA approves of or provides a separate system.

We will deliver all records, reports and other submittals that it is obligated to provide to the MBTA pursuant to the Agreement including, but not limited to, those identified in the Operator Deliverable Requirements Lists, to the Director of Railroad Operations, with copies going contemporaneously to those individuals that the Director of Railroad Operations designates from time to time (collectively, the "RRO Report Recipients").

We will work with the Director of Railroad Operations during the Mobilization Period to establish protocols to ensure timely distribution of all records, reports and other submittals to the RRO Reporting Recipients. We also acknowledge and agree that, as between the Parties, we are solely responsible for ensuring the delivery of all records, reports and other submittals required by the Agreement within the applicable timeframes.

5.A.16. Providing Information Management, Material Management, Performance Analysis

We will participate in the development, operation, and management of a Computerized Maintenance Management System (CMMS), part of the Commuter Rail IT Environment for the performance of the Engineering Services.

We will develop a detailed and comprehensive Information Management Plan to the MBTA for approval. This plan will provide a description of the Information Management Resources and process deployment.

Our target is to use the CMMS:

- On a daily basis for the input, storage and retrieval of information related to the Engineering Services
- To produce reports required as part of the Engineering Services Plan and ODRLs;
- To allow and provide real-time access to data related to the Engineering Services by our Technical Engineering Department; and
- For Maintenance Engineering and Life Cycle Maintenance-related optimization tasks.

Therefore, that CMMS, part of the Commuter Rail IT Environment will have to perform the following activities:

- Maintaining an inventory of each component of railroad infrastructure on the Service Property (including, structures, track, Right-of-Way and associated components; grade crossing systems; signal systems; and electrical systems) with a unique identifying number and digital photograph, where applicable;
- Recording required tests and inspections;
- Recording preventive, predictive and corrective maintenance activities;
- Scheduling and control of predictive, preventive, and corrective maintenance programs and associated labor and materials;
- Issuing work orders and purchase orders;
- Issuing status and repair reports for railroad infrastructure components; retaining of information on predictive, preventative and corrective maintenance for each railroad infrastructure component to produce and analyze trends; and
- Recording information necessary for warranty administration.

Moving Further Together, the MBTA will be given full access to review, inspect and audit CMMS Data.

5.A.17. Other Engineering Services

We will provide other engineering services as may be required for the performance of the Agreement Services. These engineering services may include surveys, design, development of plans, layouts, sketches, pictures, staging and phasing plans, and other engineering functions that are normally required in the operation and maintenance of a railroad.

We will assist the MBTA, as requested, with engineering services related to Service Property licenses and easements, including plan preparation. We will maintain files and provide copies of all Service Property construction and valuation plans for the Service Property maintained pursuant to this Agreement and that are currently in the control of the Operator. For any new work performed on or within the Service Property, we will provide the MBTA with a complete set of updated plans and/or documents in electronic and hard copy formats within 30 days following completion of the work. We will provide plans as necessary for control of encroachments. We will provide testimony and work with MBTA lawyers to control encroachments.

We will provide drafting services for property maintenance, presentation documents for the MBTA, and support capital acquisition appropriation requests or as otherwise requested by the MBTA. We will provide inspection and testing of track and signal systems before placing or restoring these systems to service following an outage. We will further ensure the safety compliance of all work done on the Service Property resulting from Third Party work.

We will comply with all MBTA Standard Plans, material specifications, design criteria, work practices and methods, and use only MBTA-approved materials in performing the Agreement Services and in designing modifications, improvements or additions to the Service Property.

We will provide all disciplines of engineering from our own staff or subcontracted consultants to properly inspect, maintain, design, engineer, review or to professionally ensure that the Service Property is maintained pursuant to the Agreement is kept safe and properly maintained and constructed.

We will issue all Service Property licenses and easements to Third Parties, as deemed appropriate by the MBTA, without having the authority to issue Service Property licenses and easements to Third Parties. We will update the plans for the Service Property to include such licenses and easements.

We will provide engineering reviews of plans and specifications submitted by or on behalf of Third Parties and will arrange for reimbursement of expenses incurred in our services from such Third Parties.

We will provide engineering reviews for MBTA Construction Directorate projects unless being directed otherwise. We will provide all survey services for maintenance and property control. Any plans requiring certification will be certified by a Registered Surveyor licensed in the Commonwealth of Massachusetts at no additional cost to the MBTA.

We will investigate, respond to and attempt to resolve complaints and problems on and along the Service Property that result from the performance of the Agreement Services.

We will make available to MBTA sufficient personnel that are qualified and authorized to support the MBTA and/or Other Contractors for Supplemental Work. We will provide up to four employees, of the classifications as requested from time to time by the MBTA, at no additional cost to the MBTA. Each of the above provided employees will work at the direction of the MBTA. We will provide all flagging services required to support bridge work performed by Other Contractors or Third Parties or otherwise on the Service Property, including the Attleboro Line upon direction by the MBTA. Flagging services will be compensated pursuant to direct agreements with such other Contractors or Third Parties.

We will ascertain any and all railroad construction and maintenance requirements for fiber optic companies, utilities and other Third Party occupants of the Service Property and comply with such requirements. We will request copies of agreements to MBTA Real Estate.

We will provide three dedicated and qualified employees who will operate CADD equipment on a full time basis, to convert as many existing MBTA plans as possible to CADD drawings each Agreement Year. The MBTA shall establish the priority order for the existing plans to be converted to CADD.

We will scan and create an electronic index of at least 10,000 drawings per Agreement Year, the priority order for scanning being determined by the MBTA. We will create a complete set of "as built" plans in the Commuter Rail IT Environment. Existing "as-built" plans will be maintained in accordance with FRA regulations at all times. Once plans are created in or converted to electronic CADD format, they will be maintained without "mark ups" in a 100% correct and accurate state. All CADD work will utilize the latest version of CADD software compatible with MBTA software. Electronic copies of any new or updated CADD files will be forwarded to the MBTA so as to keep the MBTA set of plans current at all times.

We will staff and operate the Plan Room located at 32 Cobble Hill Road, 1st Floor Rear; Somerville, MA 02143 with qualified staff, subject to the approval of the MBTA Chief Engineer. We assume that Plan Room duties include, without limitation, neat and orderly storage of plans, protecting plans from damage, controlling access to Third Parties, plan copying, safe and

appropriate handling of plans, Third Party billing, and cataloguing of new and updated plans.

Our intention to bind a sound partnership with the MBTA also includes benefits coming from long term actions linked to railroad innovation, life cycle cost and asset management improvement, such as the topics addressed in our cooperation with RailTEC.

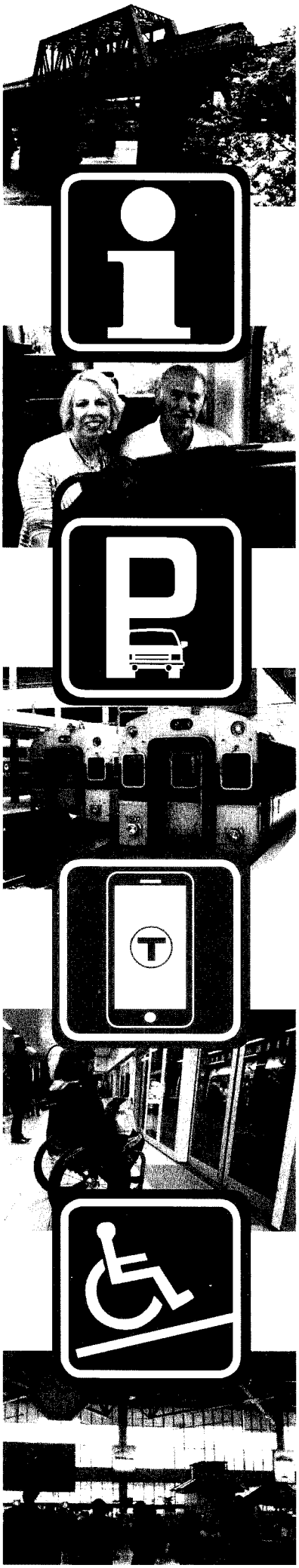
5.B. BEST PRACTICES SUPPORT

Our innovations, initiatives and best practices for improving the Engineering and Maintenance of Way function of the MBTA Service are summarized in Figure 5-9 below:

Initiative	Innovative	Best Practice	Beneficial to MBTA Customers	Cost Efficient	Support
Build an ISO 9001 Continual Process Improvement Program	✓	✓	✓	✓	Case Study: SNCF Infra ISO 9001
Develop an effective Inter-department and Agency Interface Management Program	✓	✓		✓	Case Study: The SNCF - Reseau Ferre de France Common Platform
Measure our continual improvement process with key productivity indicators	✓	✓	✓	✓	Case Study: Maintenance Engineering and Continual Improvement at SNCF Infra
Develop a comprehensive asset lifecycle and maintenance management program	✓	✓		✓	Case Study: Yarra Trams Infrastructure Asset Strategy
Establish a Technical Engineering Department	✓	✓		✓	
Establish a Lean Management Approach in Engineering	✓		✓	✓	Case Study: Lean Management at SNCF Infra
Improve Passenger Ride Comfort through Track Geometry		✓	✓		Case Study: Track Geometry Improvements by SNCF Infra
Develop a Comprehensive Track Grinding Program		✓	✓		Case Study: Improved Grinding Policy for Enhanced Lifespan & New Grinding Specification at SNCF Infra
3 D Geo-structural Model of Rock Slopes for comprehensive rock slope remediation	✓	✓		✓	Case Study: 3D Geostructural Model of Rock Walls
Reinforcing aged railway subgrades without removing track	✓	✓		✓	Case Study: Rufex
Develop a comprehensive Railway Bridge Maintenance Program that stresses Inspection, Evaluation & Repair	✓	✓		✓	Case Study: Detailed Expert Assessment of Garabit Viaduct

Initiative	Innovative	Best Practice	Beneficial to MBTA Customers	Cost Efficient	Support
Purchase or Lease Fuel-Saving Hybrid automotive equipment	✓	✓		✓	
Develop a qualified civil survey team	✓	✓		✓	Case Study: Studies and Projects
Develop a process for Planning and Managing Force Account Projects	✓	✓		✓	Case Studies: Enghien-Les-Bains Station Renovation and Modernization; The Fitchburg Mainline Improvement Project
Develop a GIS connected Asset Management System	✓	✓		✓	Case Study: Earthworks and Assets Risk Management
Cloud Based Systems in the Commuter Rail IT Environment	✓	✓		✓	As part of our commitment to **Moving Further Together** in all transparency, we will give the MBTA access to all data with the ability to generate reports. Data access will be allowed through the ITP to all systems, cloud based and those located in the Commuter Rail IT Environment. Either/both standardized, pre-formatted reports and customized reports, as the system allows, may be requested or run directly by the MBTA.

Figure 5-9: Best Practices Support – Engineering Services



SECTION 6
Transportation Services Plan Evaluation Factor Information

SECTION 6 — TRANSPORTATION SERVICES PLAN EVALUATION FACTOR INFORMATION

Contents

6. INTRODUCTION 2
I. Executive Summary 2
II. The MBTA's Objectives as We Understand Them 3
III. Our Assessment of the Current Situation 3
IV. The Results We Will Deliver 6
6.A. THE TRANSPORTATION SERVICES PLAN 8
6.A.1. Staffing, Management and Operation of the MBTA Commuter Rail Services 8
6.A.2. Train Operations, Train Crew Management, Crew and Equipment Scheduling 14
6.A.3. Maintaining and Publishing All Applicable Rule Books and Employee Timetables 22
6.A.4. On-Board Revenue Collection, Revenue Reporting, and Security and Revenue Accounting 23
6.A.5. Service Monitoring 25
6.A.6. Performance Analysis and Reporting 26
6.A.7. Training 31
6.A.8. Integrating New Technologies and Work Practices as Introduced by the Operator or the MBTA 32
6.A.9. Enforcing Third-Party Warranties 32
6.A.10. All Reporting Required by US DOT, FRA, EPA, MDTE, APTA, FTA, and Other Applicable Laws, Rules and Regulations 32
6.A.11. Ticket Office Staffing, Operation and Maintenance 33
6.A.12. Incident Management in Order to Minimize Safety Hazards and Service Disruption 33
6.A.13. Customer Information, Complaint Management and Station Information 34
6.A.14. and 6.A.15. Dispatching Services to Include Control of All Trains Subject to MBTA Dispatch Control Operating on the Service Property; and Operation of the MBTA's Two Commuter Rail Dispatching Centers 34
6.A.16. Provision of Rules and Safety Supervision Services for all MBTA Commuter Rail Lines 35
6.A.17. Providing Information Management, Material Management, Performance Analysis and Reporting 35
6.B. BEST PRACTICES SUPPORT 35

APPENDICES ..... BINDER 2
6-1 METRA — A CASE STUDY ON UNIFIED SERVICE TO A WIDE REGION
6-2 MTA METRO-NORTH RAILROAD — A CASE STUDY ON CUSTOMER FOCUS
6-3 VIRGINIA RAILWAY EXPRESS — A CASE STUDY IN CUSTOMER SERVICE
6-4 TABLE OF CONTENTS FROM THE VRE SERVICE INSTRUCTIONS BINDER / JAN. 1, 2012

6. INTRODUCTION

I. Executive Summary

Consistent with the theme of **Moving Further Together**, we will deliver the Transportation Services of the MBTA Service with a multi-faceted commitment to:

- Safety for passengers and employees, demonstrated through the responsibility of every one of our on-train employees to develop and comply with their own personal safety plan
- Improvements to customer service and the environment on all MBTA trains, through individual customer service plans and a pledge that every employee on the trains will **Think Like a Passenger** at all time. Our crews will also have a smarter, more identifiable appearance, with fresh uniforms supplied daily through our unique rental arrangement .
- Service excellence, demonstrated through higher levels of on-time performance (OTP), a greatly-expanded program of delay causality identification and analysis and management follow-up to "fix delays forever"
- Crew and equipment scheduling that maximizes the deployment and the productivity of our assets and the MBTA's assets dedicated to the service
- An extensive training program, including the introduction of outside training resources from MA community colleges and a state-of-the-art locomotive training simulator at KCS expense and a re-definition of responsibilities and accountability for our operating crews
- Partnering with the MBTA in a program of continuous improvement for the service
- A comprehensive Quality Assurance Program covering all Transportation activities and based on:
  - The industry's most aggressive 49 CFR Part 217 Program of Operational Tests and Inspections
  - Ongoing ridership analyses, beginning with our train crew personnel and managed by our Transportation Managers, to determine how and where commuter rail ridership can be increased
  - Program oversight by the Quality Assurance Representative dedicated jointly to Transportation and Customer Service so that Customer Service is even more deeply infused into our Transportation activities

Collectively all of these commitments will define **Moving Further Together** so that it means the following for the MBTA for Transportation Services:

- An operation that is safe at all times, reliable, efficient, pleasant and provided by a superbly trained, motivated and frequently tested — from a quality/performance/compliance perspective — team of engineers, conductors and assistant conductors
- A newly energized, trained, qualified management team, with each member understanding his/her roles and responsibilities and having the skills and the competency to fulfill the duties of the position
- Having access to and utilizing state-of-the-art analytical tools that will enable more efficient train scheduling, crew utilization, equipment cycling and more precise delay analysis, causality detection and delay reduction programs

II. The MBTA's Objectives as We Understand Them

The MBTA's Objectives	Our Approach
To identify Proposers that have a plan to maximize commuter rail on-time performance	We will: Make on time performance, delay reduction and improvement to service reliability our second highest priority, right after safety Improve the overall quality of the service through close attention to OTP Improve the quality and the detail of delay reporting Introduce a more precise, more detailed delay analysis methodology
To identify Proposers that have a plan designed to provide an integrated approach to customer, public and employee safety and hazard reduction	We will: Improve training for our engineers, conductors and assistant conductors and introduce a more thorough, rigorous program of operational competency and quality inspections and audits through our 49 CFR Part 217 program Require our Transportation Managers to have higher levels of qualifications, to be more involved in actual operations and to constitute a significant presence on the trains and throughout the system Implement a program of train riding and reporting for every manager in our company As discussed in Sections 2 and 3, through our Safety and Security Department, introduce a proven hazard identification/awareness/ analysis/resolution program
To identify Proposers with a comprehensive plan to ensure collection of all fare revenues	We will: Increase training and monitoring of our train crews to assure that every one of our employees fully understands and properly applies the fare structure to every transaction/verification Implement an aggressive program of internal and external audits of the ticketing/fare collection/revenue protection process
To ensure that Proposers have a process for developing and implementing train cycling plans to maximize available vehicle revenue service hours while allowing for necessary maintenance windows and minimizing locomotive idling	We will: Bring to the MBTA Service analytical tools capable of optimizing train scheduling to reduce the number of equipment sets needed to provide the service Improve the efficiency of the train and engine crew runs Reduce the number of deadhead moves Propose to the MBTA various schedule improvements which will lead to increased revenue, ridership and improved equipment utilization

III. Our Assessment of the Current Situation

Based on the hundreds of train rides that we have undertaken on MBTA commuter rail trains over the past year, as well as our findings from the Pre-Proposal Property Condition Assessment conducted by the MBTA, our assessment of the current condition of the Transportation Services being provided to the MBTA, while at an adequate level, do not appear to be attaining the MBTA's primary objectives for this function, particularly in four main areas:

Overall Safety Record

While safety appears to have improved over the past 10 years, through 2012 the overall safety performance of the current commuter rail workforce ranks no better than third among the top five commuter rail systems in America, according to the relevant statistics published by the Federal Railroad Administration. Furthermore the number of total accidents/incidents is highly volatile and has seen no significant improvement over the past 10 years (Figure 6-1). The safety issue is discussed in more detail in Section 2, Safety Plan.

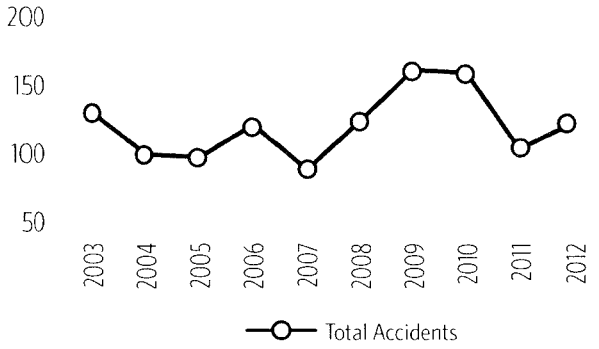


Figure 6-1: MBTA Commuter Accidents/Incidents

Inconsistent On Time Performance (OTP) by Line

Some lines achieve overall OTP above 95%, while other lines are much lower; especially the Rockport/Newburyport line and the Fitchburg line (Figure 6-2).

We benchmarked each line for its level of delays to establish what would be a good performance goal, using a standard of total minutes of delay per 10 hours of operation. We found that certain delay categories are higher on specific lines. For example, delays attributed to infrastructure and passenger-related causes are more prevalent on the Rockport/Newburyport Line.

Using this as a comparative standard, we arrived at the following OTP by line for 2012, well below the minimum standard established by the MBTA as the performance objective for this service:

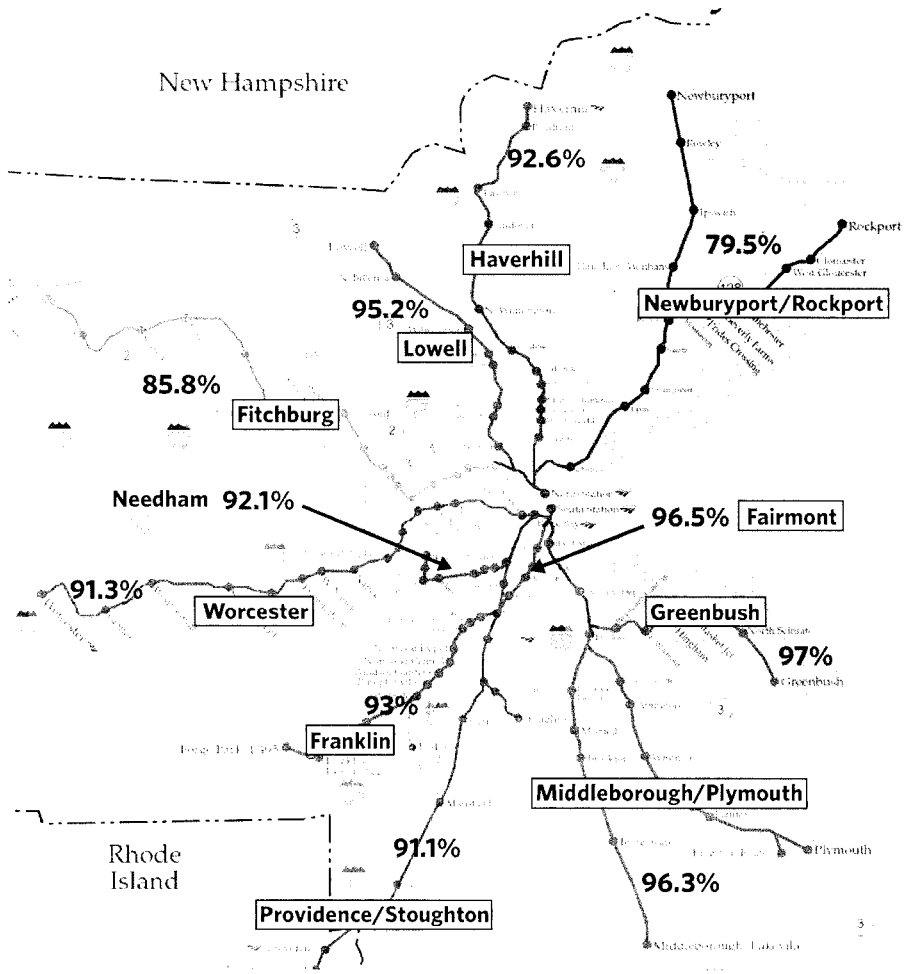


Figure 6-2: Performance by Line for 2012

Additional analysis of current service performance based on data provided by the MBTA and from field analyses indicates that commuter rail OTP has risen since 2011 (Figure 6-3), but this appears to be primarily due to milder winters. Delays caused by mechanical, engineering, transportation and passenger-related issues under the control of the operator do not appear to be improving and actual OTP has remained constant at 92%. Only two months in the past two years have seen actual service operation at 95% OTP or higher. The data provided to us also indicates that delays attributable to the operator are rising sharply, while delays attributable to other causes are dropping (Figure 6-4).

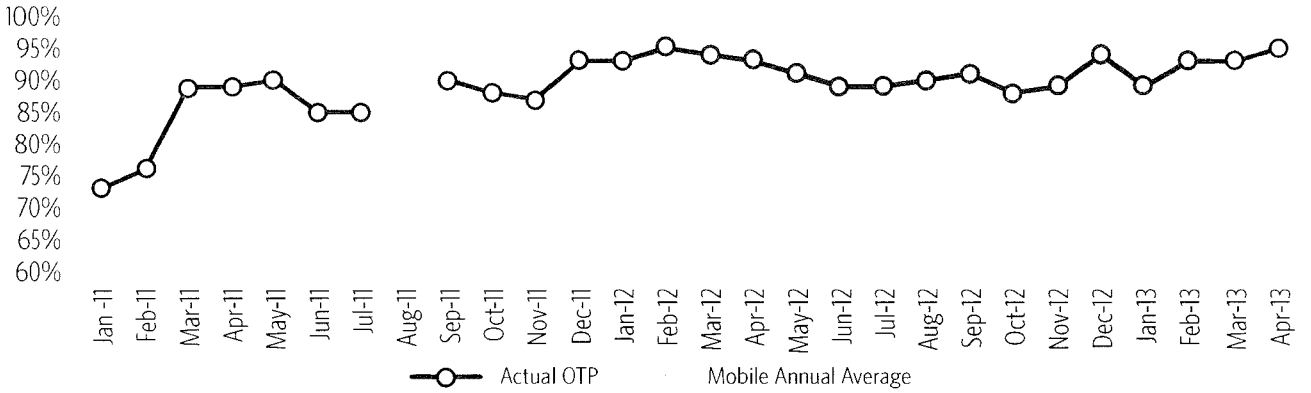


Figure 6-3: Actual On Time Performance

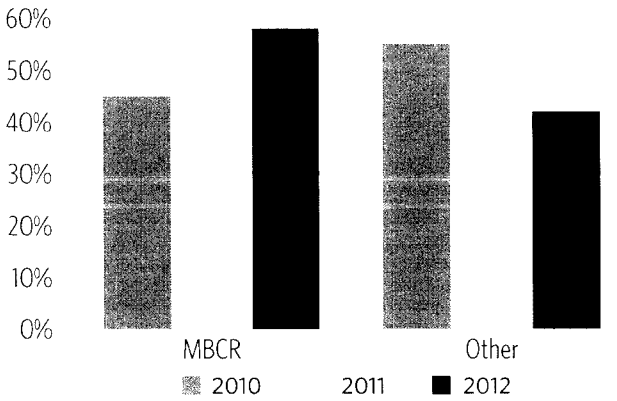


Figure 6-4: Delay Responsibility

Inconsistent Revenue Protection and Fare Enforcement

Again, based on 12 months of train riding experience in the MBTA system, fare enforcement appears very uneven, with:

- Tickets frequently not being checked until the train has gone through at least two stations
- Train crew personnel often uncertain of what fare to charge
- No indication of the presence of management on the trains

Inefficient Equipment Cycling

Our analysis of the equipment cycles currently in use in the commuter rail system indicates that:

- It is not uncommon for a single train set to operate over four or more lines on a given service day (Figure 6-5) — which can be a heavily-contributory factor to cascade delays — and that there does not appear to be a systematic management program to balance mileage and utilization of the MBTA's locomotives and coaches.
- Maintenance planning, or the lack thereof, is creating more deadhead moves between the South and the North than should be the case, an especially difficult situation to deal with if the bridge over the Charles River on the Grand Junction Branch is closed for repairs, as was recently the case (Figure 6-6).

Line	Total Lines Served by Train Sets Originating on That Line
Fairmount	4
Franklin	5
Greenbush	2
Kingston/Plymouth	3
Middleboro	3
Needham	3
Providence	4
Stoughton	4
Worcester	5
Rockport	3
Newburyport	3
Haverhill	4
Lowell	4
Fitchburg	3

Figure 6-5: Train Set Assignments by Line

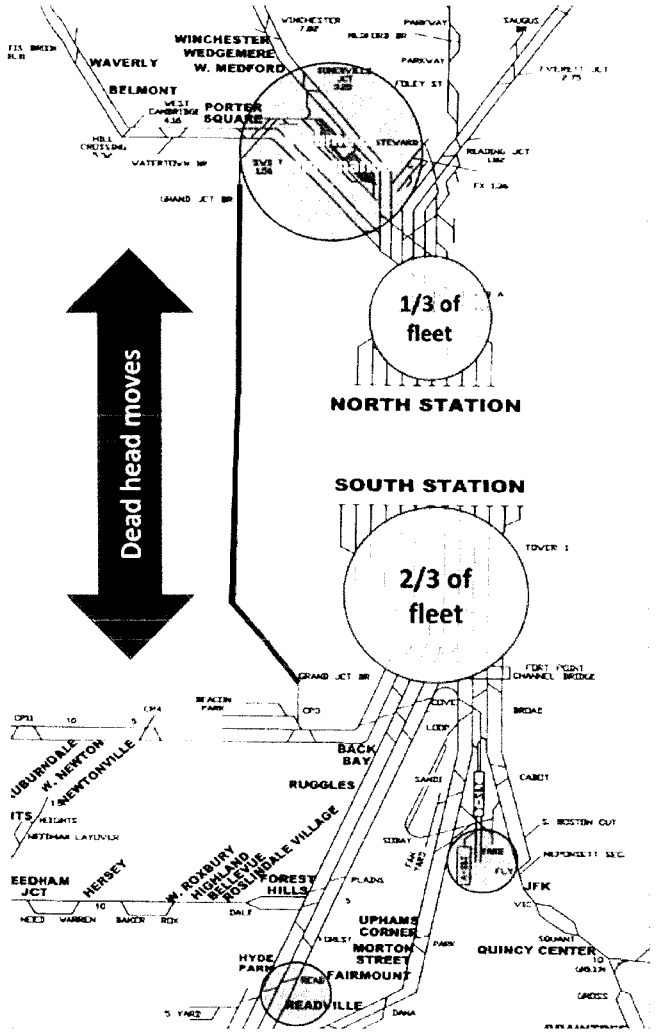


Figure 6-6: Fleet Use and Maintenance Facilities

IV. The Results We Will Deliver

Our commitment of leadership, transparency, responsiveness and managing change will be at the heart of our Transportation Services Plan. Putting safety first, we will deliver the performance that riders of the MBTA commuter network expect and deserve. Partnering with the MBTA and all other stakeholders, we will be **Moving Further Together with the MBTA**, delivering the following results (Figure 6-7):

Objectives	Results
Improve Transportation Department safety performance	35% reduction in FRA reportable injuries in the first three years of our operation of the MBTA service 50% reduction in Transportation caused accidents/incidents over the same period
Improve On-Time Performance	Achieve 95% actual on-time performance by 2019
Improve Customer Satisfaction	Increase by 5% by 2017 through the provision of a higher quality, more dependable service
Improve Equipment and Crew utilization	Reduce deadhead South to North equipment moves by 40% in two years Reduce the number of sets needed to run the service Introduce New Services
Improve Revenue Protection training and focus	Thoroughly train our conductors and assistant conductors and aggressively monitor performance. Verify through quarterly independent audits. We will be seeking at least a 5% increase in revenue through this program

Figure 6-7: Our Transportation Department Results

Figure 6-8 shows the improvement which we will achieve by category of delays, with roughly 50% of the improvement coming in the area of Other Responsibility delays and the other 50% in Operator Responsibility delays:

- Based on our analyses of the delay causality information provided to us by the MBTA, we will achieve actual on time performance of 95% for the MBTA Service by 2019, based on our analytical tools and best practices learned from our experience in other services.

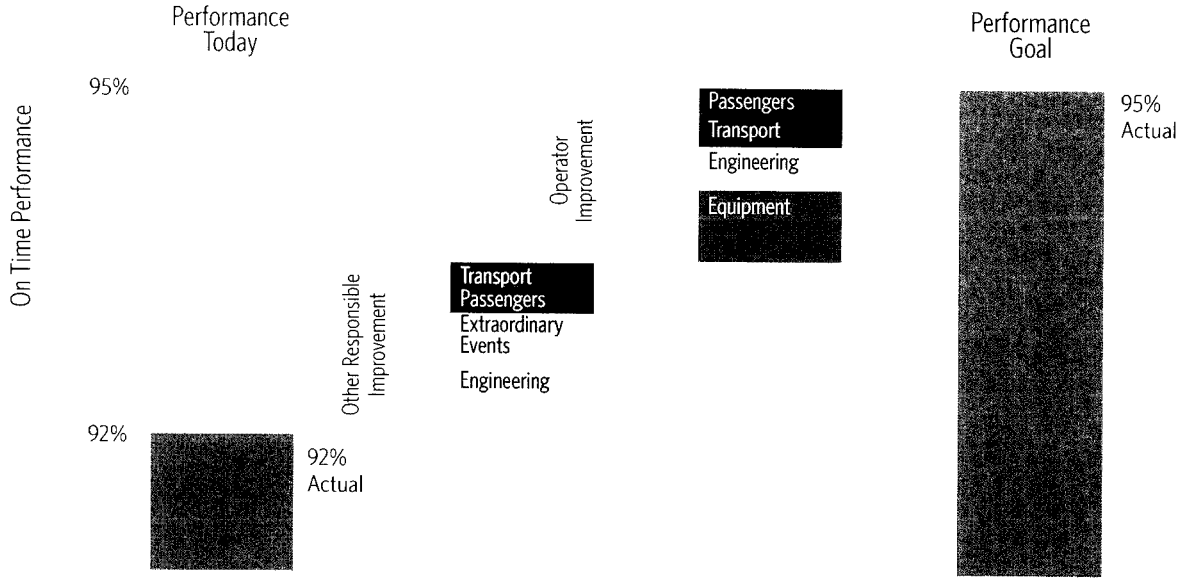


Figure 6-8: On Time Performance Improvement Trajectory

An example of our commitment to on time performance and the results we have been able to achieve is presented in the following Case Study:

CASE STUDY 6-1: SNCF Operational Performance

Figure 6-9 below shows a comparison of Punctuality (Measured as arrival at final terminal within five minutes of scheduled arrival time) for two French lines and MBCR.

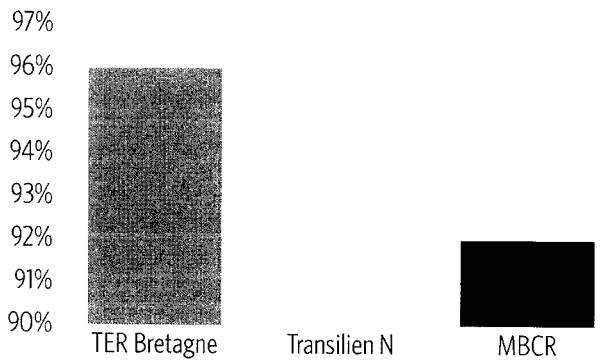


Figure 6-9: On Time Performance Benchmark

- TER Bretagne is a regional network operated by SNCF in the West of France. This network operates 340 services and carries 30,000 passengers every day in Commuter and Regional Services. Performance reaches 96% OTP.
- Transilien Line N is a Greater Paris mass transit line operated by SNCF. This line operates 277 services and carries 120,000 passengers every day along 77 miles of tracks. Despite a mixed operating environment of commuter and intercity services and significant traffic density, this line consistently achieves 94% OTP.

These results will be delivered through a number of initiatives presented in this Transportation Services Plan.

6.A. THE TRANSPORTATION SERVICES PLAN

As examples of the type of success story we intend to achieve in the MBTA Service, attached Appendices 6-1, 6-2 and 6-3 are three Case Studies developed, respectively, by George Hardwidge, our General Manager candidate and the former Deputy Executive Director for Operations of the Metra commuter rail system in Chicago; George Walker, a member of our Mobilization Steering Committee and the former Senior Vice President, Operations for the Metro North system in New York City and senior members of the Keolis management team at the Virginia Railway Express, detailing how those three systems have achieved significant improvements in service quality and sustained ridership growth over multi-year periods by applying the types of improvements described here.

What has happened in those cities/service areas to the commuter rail systems will be happening in Boston beginning in 2014.

Our fundamental approach to the provision of Transportation Services to the MBTA will be based on three important initiatives:

- Using analytical tools and processes to improve every aspect of Transportation Services
- Enabling and empowering our engineers and conductors to play a significant role in performance improvement, safety and customer service
- Giving our Transportation Managers the training and the tools to do their jobs — and hold them accountable for the results

The required elements of the Transportation Services Plan are addressed in the following sections:

6.A.1. Staffing, Management and Operation of the MBTA Commuter Rail Services

Our approach for Staffing, Management and Operation of the MBTA Services includes:

- A highly trained and qualified management team for Transportation
- Trained, qualified and motivated operations personnel

A safe and fully-compliant operation

Detail of these important components of our Transportation Services Plan follow:

A Highly Trained, Qualified Management Team for Transportation

Transportation management will be primarily responsible, on an every day, every train basis, for the development, implementation and successful ongoing conduct of programs of increased/ enhanced operating crew participation in safety, customer service and performance initiatives described further in this section.

Accordingly, our Transportation Managers (TMs) will be trained to fulfill these duties and responsibilities. The deployment of an increased number of Transportation Managers, all of whom will be operating rules qualified and at least 50% of whom will be engine-certified, will also be an essential part of this program and will assure the attainment of the results described in the Introduction section.

The Transportation Department organization chart below (Figure 6-10), shows the manner in which our Transportation management team will be assigned and will result in our having management personnel where they need to be when they need to be there. The overall force of 26 management personnel below the level of Superintendent will be deployed as follows:

- Six Transportation Managers assigned to the North Station Terminal Area. Whenever commuter rail trains are in operation, there will be a Transportation Manager in charge of operations at this locale
- A six-TM staffing pattern will also be employed in the South Station Terminal Area
- Four Transportation Managers will be assigned to the North Service lines and outlying points
- Seven Transportation Managers will be assigned to the South Service lines and outlying points

Director - Quality and Environmental Services
Chief Transportation Officer
General Superintendent, North
General Superintendent, South
Director of Train Movement
Manager, Operating Rules
General RFE
Manager, Crew Utilization
Transportation Managers, Terminal Zone (6)
Line Transportation Managers (4)
Transportation Managers, Terminal Zone (6)
Line Transportation Managers (7)
Chief Train Dispatcher, South
Chief Train Dispatcher, North
Rules Examiner (2)
Manager, Simulator Training
Road Foreman, South Side
Road Foreman, North Side
Performance Manager (Quality Assurance Representative)*
* Shared position (Customer Service & Transportation departments)

Figure 6-10: Transportation Organization Chart

- The General Road Foreman, the Road Foreman of Engines (RFE) in charge of the locomotive engineer training simulator and two RFE's/DSLE's will be assigned to both general locomotive engineer training/testing/evaluation and the management of our 49 CFR Part 217 Program of Operational Tests and Inspections

Of this entire management force, on July 1, 2014, at least 12 of the 26 TMs will be qualified, certified locomotive engineers. At least two more TMs will achieve that status over the ensuing 18 months.

The efforts of this team, furthermore, will be augmented by our entire non-Transportation management group, each member of which will be required to ride at least one train a month, report any problems and/or issues encountered to Transportation management immediately, fill out a detailed trip report and contribute to the overall program to improve service quality and service performance.

Existing Transportation management which we inherit will be fully trained for their duties and responsibilities, including earning whatever certifications and/or licenses are necessary to their positions.

They will be assigned in a manner that will put them in the right places at the right times to provide effective transportation management for our operation of the MBTA Service and which will be fully compliant with the requirements of Schedule 3.1 of the RFP.

Their responsibilities will include a considerable amount of time riding the commuter trains, monitoring and evaluating our train crews (in the process assuring that each engineer, conductor and assistant conductor is ridden with by Transportation management at least once a month).

Under the direction of the Chief Transportation Officer and the two Superintendents, all Transportation Managers will be trained and qualified on the NORAC (Northeast Operating Rules Advisory Committee) operating rules and all of the relevant operational documentation listed in the RFP. In addition, as mentioned earlier, at least 50% of the Transportation management team will be qualified, certified locomotive engineers, with the ability to perform operational tests and instructions pursuant to the requirements and the standards of our program for 49 CFR Part 217 Program of Operational Tests and Inspections. The manner in which this expanded, more competent management team will be assigned and deployed is described earlier in this Plan, defined in more detail below and shown graphically above in the Transportation Department organization chart.

Pursuant to the requirements of Schedule 3.1 of the RFP, the North Superintendent will be the designated replacement for the Chief Transportation Officer, whenever the CTO is absent or the position is vacant.

The Transportation Managers will have full responsibility for the daily management of our operation of the MBTA commuter trains. They will be responsible for the operational competency and performance of all our operating personnel and will carefully observe, monitor, test, evaluate, train and mentor every one of these employees to ensure that high levels of safety, reliability, customer service and passenger comfort are demonstrated every day.

They, as a group, will also work very closely with the Director - Customer Service and the Customer Service staff to address a number of issues, including: lost and found issues, ridership counts as requested and other information that needs to be exchanged between the two departments, our management and the MBTA.

This group will also communicate closely with Amtrak, CSX and Pan Am Railways to ensure the constant coordination of all rail operating entities utilizing the MBTA's commuter lines.

Transportation Managers and Road Foremen

Our Transportation Managers (TMs) and Road Foremen of Engines (RFE's) will be the eyes, ears, hands and minds of our management team on the MBTA trains with our train and engine crews. Their duties and responsibilities include:

- Managing our train and engine crews and their safe, efficient, punctual operation of MBTA trains, including the monitoring and management of operating personnel and their compliance with individual safety plans and any other employee-generated plans for which they have responsibility
- Performing and documenting fitness-for-duty checks
- Administering our program for 49 CFR Part 217 Program of Operational Tests and Inspections, carefully analyzing all test results and taking corrective/disciplinary action as promptly and as thoroughly as possible
- Working in the field with the train and engine crews to observe, monitor, test, document, coach, train and ensure that all train and engine crewmembers are fully- qualified, properly trained and capable of performing the duties and responsibilities of the engineer, conductor and assistant conductor positions. All crews will be ridden with by Transportation management at least once a month.
- Maintaining their locomotive engineer and conductor certification and being prepared at all times to operate an MBTA train, if the necessity arises
- The RFEs and all of the qualified TMs will also be Designated Supervisors of Locomotive Engineers (DSLEs) and will be responsible for the testing, observation and evaluation of our engineers

As part of our commitment to management competency, transportation safety and excellence and customer service, we will work with these managers to determine the manner in which they have been able to do their jobs in the past, the strengths and weaknesses of that approach to the management of commuter train operations and the points of emphasis for the our management of the MBTA Service. We will focus on:

- Train riding and service performance monitoring
- Performance and documentation of Fitness for Duty checks
- Rigorous safety and regulatory compliance
- Daily quality audits of trains
- Daily contact with train and engine crew personnel
- Frequent on-train inspections
- Prompt, thorough response to all customer inquiries, comments, criticisms, etc.
- A comprehensive program of tests, observations and proficiency analyses
- Provision of positive growth-oriented results and findings to employees as well as swift, effective corrective action when required
- Initiative and problem-solving whenever required

In short, we will expect our Transportation management team to conduct an ongoing quality-assurance program every day. An important element of that program will be the administration of our program for 49 CFR Part 217 Program of Operational Tests and Inspections. During Mobilization, our existing program, currently used in the VRE Service, will be adapted for use on MBTA and will be in constant use by our TMs as part of their ongoing program to ensure the competency, capability and proficiency of our operating crews.

This safety-critical management team will also fully coordinate the work of the Transportation Department with the Safety and Security, Customer Service, Mechanical, Engineering and Quality Departments to assure that integrated service delivery is a constant hallmark of the MBTA Service.

The Quality Assurance Representative assigned to Transportation and Customer Service will be the Performance Manager from the Customers Service Department, as described in the Customer Service Plan. This manager will be an important part of this effort and will provide guidance to this group relative to measuring the results of their activities and achieving progress toward continuous improvement of the service.

Trained, Qualified and Motivated Operations Personnel

In order to improve the performance, the safety, quality, customer service, customer satisfaction and the ridership levels of the MBTA's commuter rail service, all of our engineers, conductors and assistant conductors will be required to play a more important, better- defined and more comprehensive role in service delivery, including:

- The demonstrated ability to **Think Like A Passenger** to develop their individual customer service plans and to foster a truly welcoming customer service environment on trains as well as the ability to perform safely in every aspect of their duties, including adherence to their individual safety plans.
- **Operational Competency and Rule Compliance** — All employees governed by the applicable operating rules will be trained, examined and certified. All operating employees will be examined annually on the operating rules. Transportation Managers and Road Foremen will continuously observe, monitor and test employees on their rules compliance and comprehension.
- **Equipment** — It is essential to good service that the equipment be operated and utilized properly. We will provide appropriate training in equipment familiarization, air-brake and train-handling instructions, and all train crew personnel will be qualified in basic troubleshooting procedures.
- **Customer Service** — We will ensure that all train crew personnel are adequately trained to assist customers in all types of situations. As part of their regular training they will receive intensive, mandatory training on customer service, fare collection, the proper handling of persons needing assistance and the proper response during routine and emergency situations.
- **Appearances** — Train crew personnel will receive fresh uniforms daily through our unique rental program.
- **Revenue Protection** — We will focus attention on the protection of the MBTA's revenue. We will focus on both the training and monitoring of train crew compliance with proper ticketing procedures, as well as the courtesy, consistency and thoroughness of checking and selling MBTA commuter rail tickets. Consistent practice promotes compliance, both from the customers holding tickets and the employees in the performance of their duties.
- **Communications** — We recognize the importance of communicating appropriate, accurate and timely operational information to the appropriate train dispatchers and to transportation management in the event of an incident. This includes the need for security assistance, the need for substitute bus service and passenger-related information as required. We place great emphasis on the need for train crew personnel to provide a vital link in the communications chain. This is crucial to the success and growth of the MBTA service.

This role will be carefully defined and presented through:

  - Enhanced, expanded and improved training programs, including programs developed and presented through, among others, Bunker Hill Community College and Roxbury Community College, will better prepare our employees to fulfill these roles and responsibilities. A KCS-purchased locomotive training simulator described later in the Transportation Services Plan, will also be a vital part of this effort.
  - The frequent presence on the trains of all managers, who will participate in a comprehensive program of train riding, observation and reporting.

This process will start with each operating employee being responsible for his/her individual safety plan, prepared by the employee, reviewed with transportation and safety management, and then implemented and adhered to by the employee.

Each plan will be periodically reviewed with the employee by management to ensure compliance, continued relevance and timely plan adjustments/improvements.

This will be the start of our program to better apply and utilize one of our most important assets in the delivery of the MBTA's commuter rail service — our on-train workforce of engineers, conductors and assistant conductors.

Also, in addition to the development of individual safety plans, within the first two years of revenue service, each on-train employee will be required to develop and implement an individual customer service plan aimed at making the achievement of increased customer satisfaction not only a commitment, but a total team effort.

Our train crews, consisting of engineers, conductors and assistant conductors, will be responsible for the safe, proficient, reliable operation of the MBTA's trains and the safety and comfort of the customers while they are on the train. More complete descriptions of the duties and responsibilities of these three safety-critical positions are provided in the next section, pursuant to the structure of the RFP.

Safe, Fully-Compliant Operation

We will operate the MBTA Service in accordance with all state, local and Federal Railroad Administration (FRA) regulations, procedures and inspections and licensing/certification requirements. As such, all of our operating practices, policies, programs and procedures will conform fully to all applicable federal, state and local laws.

Especially, pursuant to the requirements of the RFP, in the operation of the MBTA trains, we will comply with the following:

- The current, applicable version of the NORAC Operating Rules; Amtrak Operating Rules and Electric Traction Instructions, where applicable
- Division Notices, Bulletin Orders, Special Instructions, etc.
- All FRA-required programs and plans governing the operation of commuter-rail trains on the general railway system of the United States, all of which will have been prepared, submitted to (if required) and approved by FRA prior to the beginning of service operation
- The MBTA System Safety Program Plan (SSPP), our General Safety Policy, our Operator Safety Compliance Plan (OSCP), and our Operator System Security Compliance Plan (OSSCP)
- MBTA train schedules, public timetables and the physical characteristics of the MBTA lines over which we are operating
- Equipment-operating instructions for the MBTA fleet of locomotives, coaches and control cars
- The current version of MBTA passenger service policies and fare/tariff policies
- All applicable APTA standards
- Any other applicable statutory, regulatory and/or safety instruction, directives and/or requirements

All service-related documentation that must be carried by our operating crews will be provided to them in our Service Instructions Binder for the MBTA Service. An outline of the contents of this Binder, as currently being utilized in the VRE Service, is provided in Appendix 6-4.

As further detailed in Section 8 Management Plan, our Quality Assurance Program (QAP) will be a fully-integrated management process to provide quality assurance, guide the continuous development of the organization and deliver continuous improvement in accordance with the requirements of ISO 9001. The Transportation Plan will be implemented as part of the QAP and will contain the following four principal elements: Plan, Develop, Check, Act (Figure 6-11).

Plan

Under the guidance and oversight of the Quality Assurance Representative (QAR) assigned to Transportation and Customer Service, the Chief Transportation Officer will conduct detailed analyses of historical performance to identify operational improvement initiatives for the Transportation Plan. Operational analyses conducted using performance reports will be used to identify and prioritize delay causes by type, frequency and severity. Our team will

identify initiatives to address the root cause of historical delays in order to improve performance. Initiatives could include propositions of changes to schedule, infrastructure, maintenance, work practices or operational procedures.

The results of these analyses will help define several of the components of the Transportation Plan, including but not limited to twice-annual schedule revisions, or as agreed upon with the MBTA, improved equipment cycling and crew utilization plans and effective, track allocation plans for the North and South Station terminals.

Develop

The implementation of the Transportation Plan will rest on the various plans cited above and will be implemented by the Chief Transportation Officer and his/her team. Key Performance Indicators (KPIs) from the Transportation Plan will be included as part of the Performance Management System.

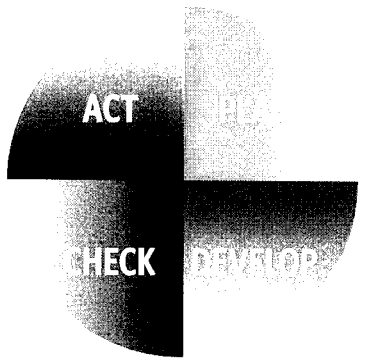


Figure 6-11: QAP Elements

Check

Measuring the delivery of the Transportation Plan will be done by the Chief Transportation Officer and his/her management team, which will be augmented by specialists in the Transportation function coming from France and/or other Keolis operations.

Act

The Chief Transportation Officer will lead daily review sessions involving the Transportation management team to ensure that issues that impact performance today are resolved within that day. The action plans resulting from these meetings will be swiftly and promptly pursued to resolution by Transportation Managers.

The Deputy General Manager will lead weekly meetings to address non-urgent escalated issues from the daily meeting. This meeting will also address coordination issues for project activity, maintenance and operations such as occupations of the track.

The General Manager will lead monthly meetings; these will involve a review of the KPIs and the Performance Management System for all functional areas of the business.

6.A.2. Train Operations, Train Crew Management, Crew and Equipment Scheduling

Our approach to Train Operations, Train Crew Management and Crew/Equipment Scheduling will rely on:

- Accurate scheduling of train operations
- Increased efficiency and reliability of train crew and equipment rosters
- Customer service-focused train crew responsibilities

Accurate Scheduling of Train Operations

Applying two Swiss modeling tools used in some of the major passenger rail services in Europe, we modeled the existing network. We used VIRIATO for the timetable, equipment cycles and schedule conflicts solving, and QNAMIC for the crew runs.

We have identified a number of areas where we believe that current train schedules can be improved, including:

Improved Timetable Accuracy

A number of MBTA train schedules appear to have built in conflicts in their schedules. During the early months after we begin the operation of

the MBTA Service, we will perform a complete timetable analysis and actual performance observation program to develop accurate line-by-line running times, identify schedule conflicts and suggest appropriate recovery time, so that we can work with MBTA to develop, for MBTA consideration, a set of accurate, dependable schedules for the entire service.

The Middleborough line provides a good example to illustrate track conflicts in current schedules (Figure 6-12):

There is a four minute conflict at "VIC" between these two trains. Our thorough review of the entire MBTA Service will identify all such built in conflicts and present an early opportunity to improve on time performance.

As an example of how such a rescheduling process can improve a service, the following case study demonstrates the impact on OTP for a commuter train service in the Paris area.

This methodology led to sharp performance improvements on the line (Figure 6-14).

Our scheduling exercise will take into account elements such as train speed and dwell time, but also some external factors which can have an impact on OTP, such as speed restrictions, engineering work and signal failures:

Speed Restrictions on Rockport and Newburyport Lines

On the Rockport/Newburyport Lines, MBTA trains suffer up to a 2.5 point decrease in OTP during the summer boating season because of drawbridge openings.

We propose to develop for MBTA consideration an amended timetable for the summer boating season to account for drawbridge openings. We will use historical data, including GPS tracking, to construct the amended timetable. We will work closely with all local authorities, especially the Coast Guard, relative to drawbridge openings.

As an output of this effort, we believe that we can create a more accurate, dependable timetable for customers during the summer boating season.

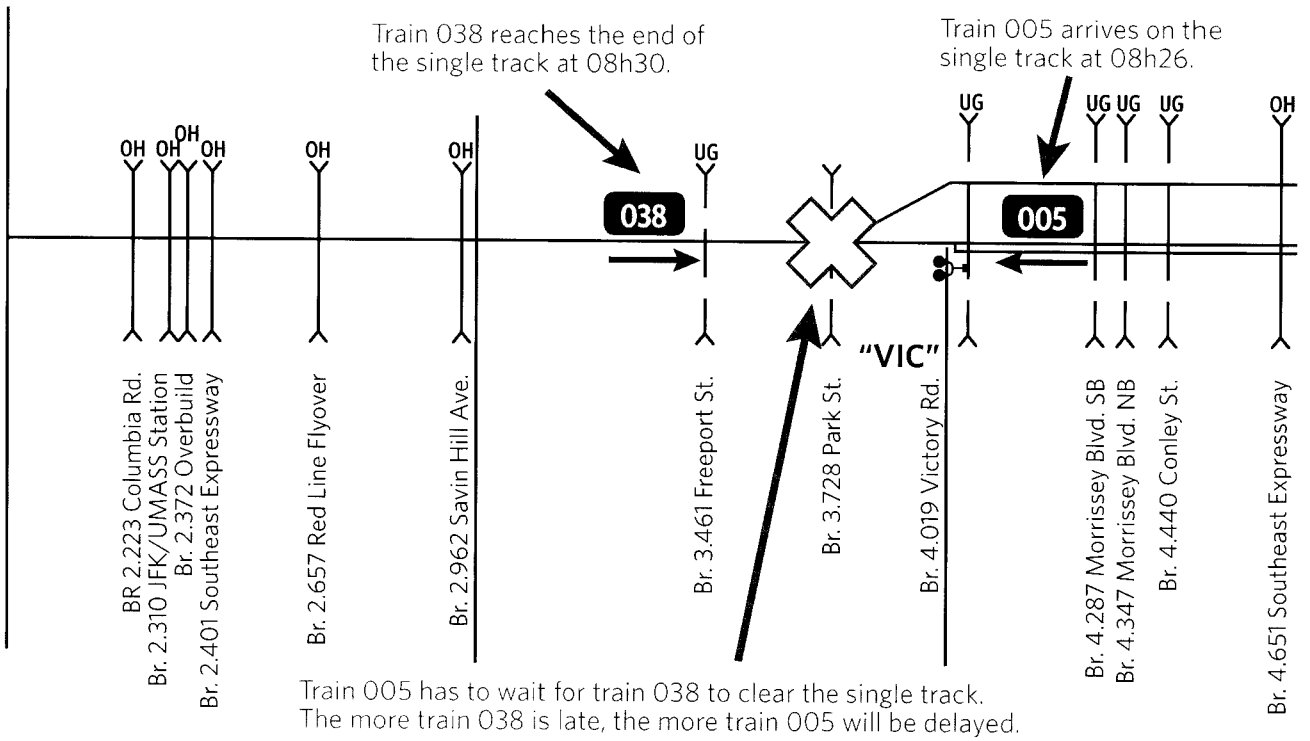


Figure 6-12: Single Track Conflicts at VIC on the Middleborough line

CASE STUDY: SNCF Greater Paris Operations on Line N

Line N Transilien is a line operated by SNCF in Greater Paris. Every working day, over 77 miles with 35 stations, SNCF operates 277 services and carries 120,000 commuters. In December 2011 a major re- scheduling of all trains paths was done to accommodate growth and upcoming engineering work. Statistical studies were undertaken to integrate theoretical calculation and practical time for each operation, especially stop time and journey time between each station. For instance, the graph in Figure 6-13 shows the dwell time for different trains in a station. In this station, a stop time of 40 seconds has been scheduled, as it fits with most of the trains. For the trains with average stop time above 40 seconds, train crew action is needed to reduce dwell time.

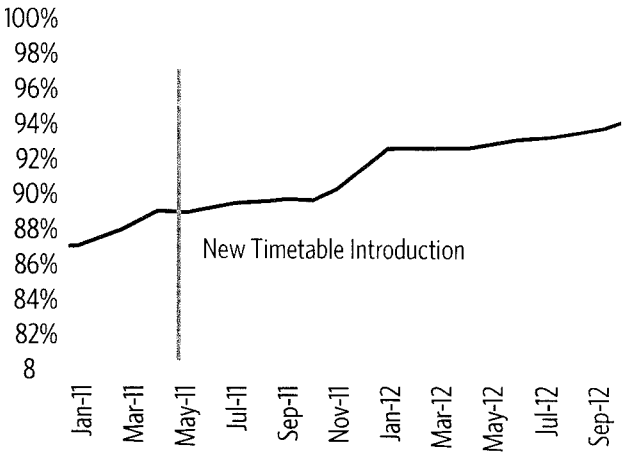


Figure 6-14: Transilien Line N Punctuality

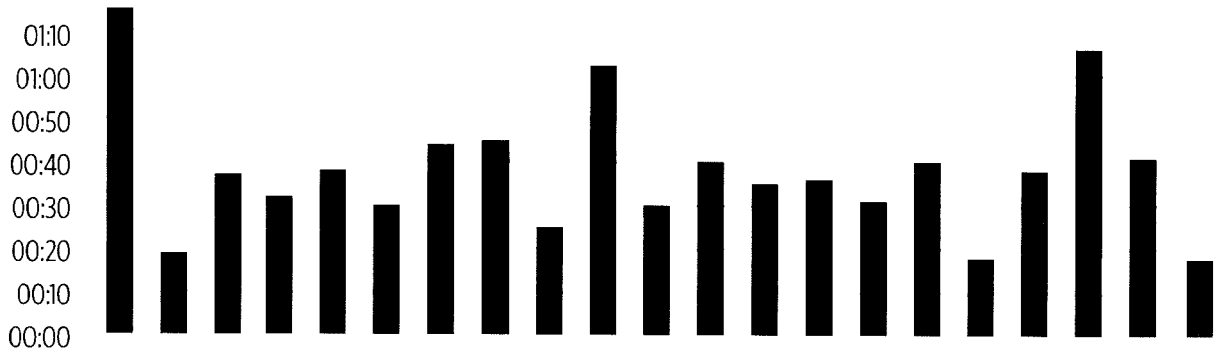


Figure 6-13: Example of Statistical Studies to Assess Dwell Time at Line N Rambouillet Station

Fitchburg Line Engineering Work and Signal Failures

Fitchburg Line delays attributed to Engineering are higher than on other lines. Many of these delays are attributed to signal failures, crossing failures and speed restrictions when, in reality, many delays are the result of engineering work that are taking place on the Line.

We will review, analyze and propose adjustments to the organization and scheduling of the engineering projects to reduce this negative impact on OTP.

Increased Efficiency and Reliability of Train Crew and Equipment Rosters

We have carefully analyzed the existing crew runs and equipment cycles that the MBTA has provided. Working with these existing assignments, we have begun to develop a new set of crew runs and equipment cycles which will enhance the productivity of the assets assigned to the MBTA Service. Furthermore, we believe that tighter train schedules, with reduced end-to-end running times, are possible and will improve the use of all operational assets. This

will result in better scheduling for engineering work, an increase in average train speed and improved system reliability.

We will work with MBTA staff during Mobilization to further refine and improve crew and equipment cycles, so that within a short time after we assume operational responsibilities, the resources allocated to train operations will be as efficiently assigned and utilized as possible.

Improve Crew Runs

When we analyzed the actual crew runs it appears that there are many inconsistencies. Our approach is to implement a more efficient and less expensive crew scheduling system. This will include three steps:

- Standardize the pre- and post-reporting times
- Optimize crew runs
- Eliminate the impact of crew swaps on OTP

Standardize the Pre- and Post-Reporting Times

When we analyzed the actual crew runs, we saw that the sign on and sign off times were not always consistent with the first train departure or the last train arrival.

Our approach is to standardize the pre- and post-reporting times at each reporting point. We will work closely with the unions to have a good understanding of the specific conditions at each point and the time needed for all the tasks that need to be done, including:

- Sign up time
- Walking time from the reporting point to the train
- Preparing the train
- Running the train from the layover to the station
- Waiting time for boarding before departure
- Waiting time for alighting before departure
- Running the train from the station to the layover
- Tying up the train
- Walking from the train to the office
- Sign out time

Optimize Crew Runs

In the current crew scheduling system there is a lot of scheduled overtime. We have developed a solution to reorganize crew utilization planning, using the same resources but at a lower cost. We were able to do this by finding a balance between release time and overtime, resulting in more rest time, a better working environment and increased safety. This reorganization will be put in place during the first years of our operation of the service.

In addition, we realized that some train crews started and finished their assignments with a deadhead move. We believe that this can be changed. 6-15 and 6-16 illustrate this initiative:

In addition, if the train that a train crew is deadheading on is late, it can impact the first

Current Situation

Name	Days	Sign Up	Sign Out	Trains	Worked Trains
CSSH-21	Mon	11:02 AM	10:17 PM	SHDH754 711 718 P521 P528 631 630 DHSH093	711 718 P521 P528 631 630
CSSH-18	Tue-Fri	11:02 AM	10:17 PM	SHDH754 711 718 P521 P528 631 630 DHSH093	711 718 P521 P528 631 630

Figure 6-15: Example of Actual Roster

Suggested Situation

Name	Days	Sign Up	Sign Out	Trains	Worked Trains
CSSH-21	Mon	12:25 PM	9:48 PM	711 718 P521 P528 631 630 DHSH093	711 718 P521 P528 631 630
CSSH-18	Tue-Fri	12:25 PM	9:48 PM	711 718 P521 P528 631 630 DHSH093	711 718 P521 P528 631 630

Figure 6-16: Example of Optimized Roster

train they operate. We believe that reducing on train deadheading will increase system OTP.

Eliminate the Impact of Crew Swaps on On-Time Performance

During revenue operation, some crew swaps are done between stations, such as at Pawtucket. This can have a negative impact on reliability because this unscheduled stop can add as much as five minutes to the journey time. In addition, from a customer service point of view it is difficult for the passengers to understand why the train stops. We propose to make all our crew swaps at stations.

Improve Equipment Productivity

Our approach to improved equipment productivity has two principal parts:

- Optimize train set assignments
- Restrict train sets to the fewest number of lines possible

Optimize Train Set Assignments

We analyzed the actual equipment cycles currently in effect and it appears that by making very slight changes to the North Service timetable, we can provide the daily service with one less equipment set.

For example, minor changes of less than three minutes on very few trains, changes of 10 minutes or less on others (e.g., Train 281 leaving 10 minutes earlier at 5 55pm instead of 6 05pm and train 284 leaving seven minutes earlier at 6 38pm instead of 6 45pm). These types of small changes, as represented in Figure 6-17 below, can reduce the need for a train set.

We believe that this analytical process applied to the methodology currently being used for equipment cycling can produce significant efficiencies and savings.

Restrict Train Sets to the Fewest Number of Lines Possible

From studying current equipment cycles, it appears that, in some cases, a single train set may operate on up to five different lines (Figure 6-5 above). With this equipment utilization approach, if a delay occurs on one line, there may be residual delays on up to four other lines.

We will reduce the number of mixed equipment cycles, trying to restrict a train set from operating on more than three lines in a service day (Figure 6-18).

Introduce New Services

The MBTA Systemwide Passenger Survey of 2008-09 demonstrated that commuter rail passengers care about the frequency of service. Overall, "frequency of service" was checked by the second highest number of riders on every line...as one of the three most important service

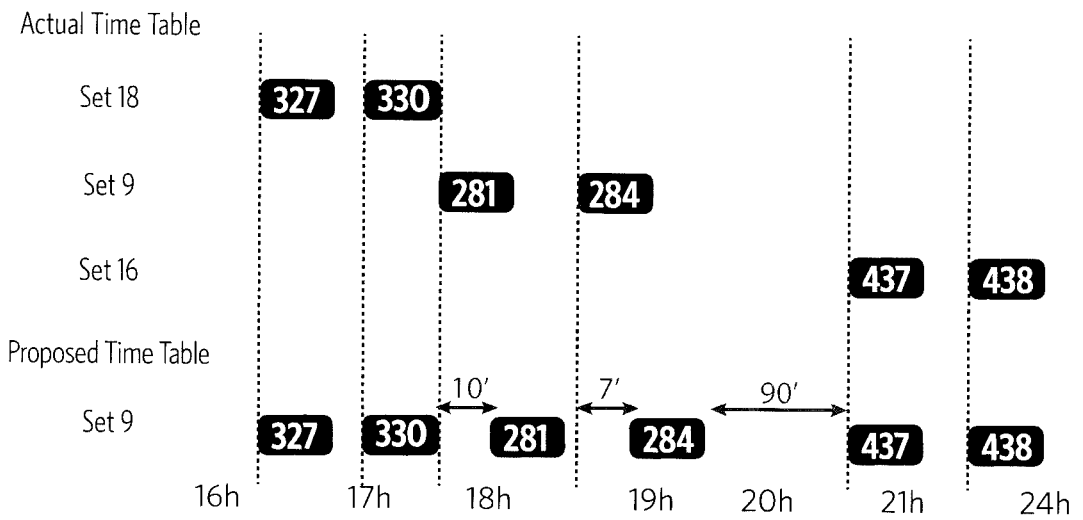


Figure 6-17: Example of Proposed Time Table Change

Line	Current Number of Lines Operated Over	Future Number of Lines Operated Over
Fairmount	4	2
Franklin	5	2
Greenbush	2	2
Kingston/ Plymouth	3	2
Middleboro	3	2
Needham	3	2
Providence	4	3
Stoughton	4	3
Worcester	5	2
Rockport	3	2
Newburyport	3	3
Haverhill	4	2
Lowell	4	2
Fitchburg	3	1

Figure 6-18: Current and Proposed Equipment Cycles

quality measures. It was also among the less favorably rated measures. This view is backed by our own survey and focus groups, which particularly highlighted frequency of service in off-peak periods. Our non-user focus groups also highlighted the perception of limited service on evenings and weekends — particularly with respect to events, games and other evening entertainment.

We are will work closely with the MBTA to improve the service and satisfy customers by rethinking train scheduling, including lessening running times, adding express trains when possible, and increasing the frequency during off peak hours, all of which should have a direct impact on ridership.

The MBTA is investing $200M in the Fitchburg line to improve the service and increase the ridership. We completely support this action and, to this end, have already begun developing schedule improvement ideas to service on this line. We will propose new services to increase ridership. These new services will be introduced by optimizing equipment utilization and will not require any additional train sets.

One preliminary analysis which we have undertaken shows that new services could be introduced on the Fitchburg line. Speed is a key factor to increasing ridership. In Figure 6-19, the x axis displays the distance from North Station, and the y axis displays the journey time. The two lines define the 40 mph average (lower line) and the 25 mph average (upper line). Each circle shows the number of passengers getting aboard the train for the Fitchburg line on morning peak-hour inbound trains. It can quickly be seen that the higher average speed trains attract more passengers.

Other types of proposed schedule improvements, which we are experienced in developing and have the analytical tools to support, include:

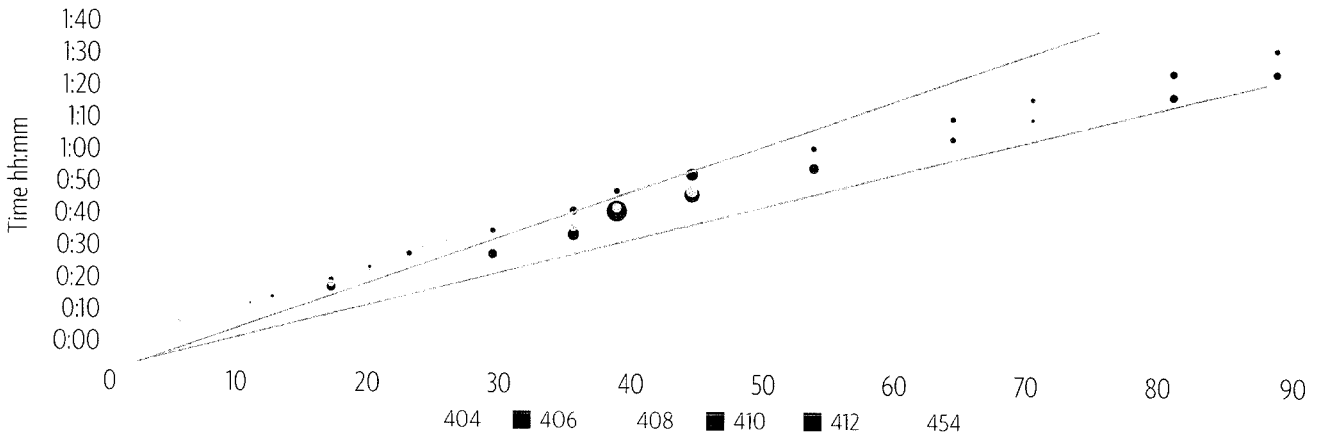


Figure 6-19: Journey Time, Miles and Number of Passengers by Stop for Fitchburg Line Inbound Trains

Time Elasticity

This service concept introduces two types of trains: local trains stopping at all stations, and express trains stopping only at the main stations. The main stations, based on ridership analysis for the Fitchburg line, include Fitchburg, South Acton, Concord, Brandeis/Roberts, Waltham and Porter Square.

With a journey time of 77 minutes, express trains can produce a time savings for customers of almost 20%.

Frequency Elasticity

Another potential way to address customer concerns regarding frequency of service is to adapt existing train schedules to a clockface format which could add as many as 10 additional off peak trains on a given line. By doing so, train frequency would rise by 33% going from one train every hour, to one train every 40 minutes. This can be accomplished with the use of an additional set of equipment and can have a significant impact on ridership.

Introduction of new peak hour express trains

We have done a study on the Fitchburg line to show how we could recommend to the MBTA a scheduling methodology that would increase the average speed to over 40 MPH with some changes in train schedules and in the stopping pattern of various trains. We will be very pleased to present these concepts to the MBTA in the form of detailed service improvement presentations (Figure 6-20):

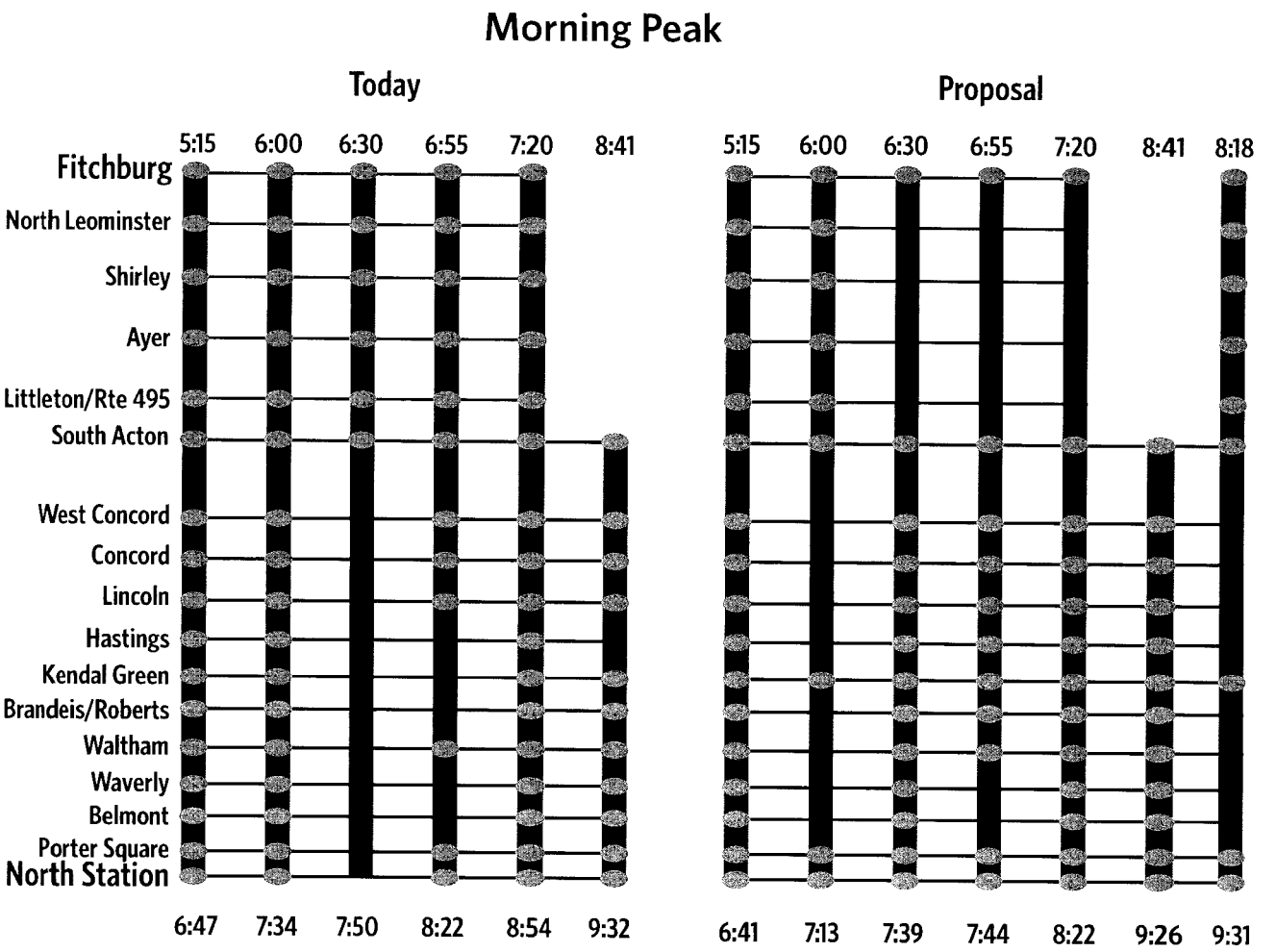


Figure 6-20: Study of Improved Journey Time on the Fitchburg Line

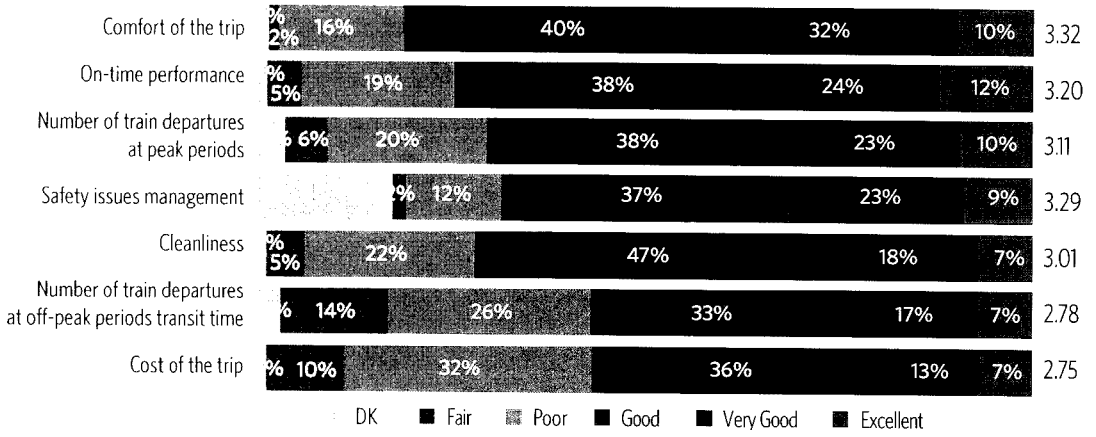


Figure 6-21: Our Customer Survey

With the addition of two train sets, we can propose new peak hour express services and will change the stopping patterns of trains to increase the average speed of the service, reducing travel time and improving equipment utilization. Our experience in other services shows that this will have a positive effect on OTP and ridership.

The service is then able to deliver shorter travel times, increased frequency and improved equipment utilization.

This new service concept could be deployed by July 2015, subject to MBTA approval.

Increase the Number of Train Departures at Off-Peak Periods

- The survey we conducted during proposal preparation shows that 40% of the passengers are not satisfied with the frequency of off peak services (Figure 6-21):
- We will analyze closely the ridership at each station during off peak hours. With the MBTA's concurrence, we will develop a proposal for the provision of additional trains during the day. Working closely with the Mechanical Department, we will work on a solution to increase availability and put more trains in service during the off-peak period.
- This approach can provide better service between off-peak hours, creating the opportunity for increased ridership, and the customer's satisfaction.
- This will be done by July 2015, subject to MBTA approval.

Customer Service-Focused Train Crew Responsibilities

Figure 6-22 details how our train crews will work to make the customers' on-train experience more pleasant and more customer service focused. This will be part of our **Think Like a Passenger** campaign.

Locomotive Engineer

All engineers operating MBTA trains will be certified pursuant to the requirements of our 49 CFR Part 240 Locomotive Engineer Certification Program. In addition, we will provide specific training to Engineers:

- Troubleshooting mechanical problems with the equipment, as well as making emergency repairs whenever possible
- Safety resets, interlock functions, override processes, the ability to change fuses and reset circuit breakers, Head End Power functioning and problems and restarting locomotive prime movers

Conductor and Assistant Conductor

The conductors and assistant conductors will be fully trained in:

- Safety and security
- Customer Service, integrating any help we can provide to customers

When	Engineer	Conductor and Assistant Conductor
Before the train	Take notice of latest information about actual operating conditions. Conduct a job briefing with other crew members.	
Pre-Departure Time	Test and check Locomotive (brake system, locomotive cables and connections, radio, FRA requirements)	Test and check Coaches (cables and connections, lights, doors, PA systems, restrooms)
Welcome Customers		On-platform greeting
Departure	Work with Conductor and Assistant Conductor to ensure a safe departure	Check doors are closed and platform is clear until the last coach leaves the platform
Onboard	Focus on safe operation, train handling, smooth station stops and passenger comfort	Emphasis on fare collection/ticket verification, and walking through the train to ensure safety and comfort of passengers
At Intermediate Stop	Work with Conductor and Assistant Conductor to ensure a safe departure	Assure the quality and accuracy of station announcements, operating doors, check doors are closed and platform clear until the last coach leaves the platform
Incident	Troubleshoot and make emergency repairs, report to Train Dispatcher and Conductor	Announce reason for delay and inform passengers of expected duration at least every 15 minutes
Final stop	Park train, secure train or prepare for next departure	Ensure all customers have detrained, look for lost items, properly secure equipment if needed, prepare train for next departure
After train operation	Report information to management (operation difficulties, delay causality, deficiencies, etc.)	Report information to management (revenue collection, ridership, delay causality, deficiencies, etc.)

Figure 6-22: Customer Focused Train Crew Responsibilities

- On-board revenue collection, fare verification and revenue reporting

Safety/Security Responsibilities

Safety, security, emergency preparedness and emergency response are primary responsibilities for all conductors and assistant conductors. Our employees will receive safety, security, and emergency-related training, as detailed in Section 2 Safety Plan and Section 3 Security, Emergency Preparedness and Emergency Response Plan.

Following guidelines provided in the training, as well as instructional material, train crews will be responsible for making a determination of what items or actions pose a potential safety or security threat.

General Conduct

In the spirit of **Moving Further Together**, train crew personnel will greet all riders in a friendly manner, treat MBTA customers with respect and dignity, make eye contact when communicating with riders and wear a complete uniform. Crews will not be permitted to occupy revenue seats with personal belongings. The use of tobacco products while on duty will be strictly prohibited.

6.A.3. Maintaining and Publishing All Applicable Rule Books and Employee Timetables

We will submit to MBTA during Mobilization, a Service Instructions Binder, which will govern the conduct of all train crews engaged in

the operation of the MBTA Service and will encompass, without limitation:

- All required operating rule books and employee timetables: we will develop an Employee Timetable containing specific operating rules, safety rules and special instructions. The timetable will be supplemented by notices, bulletins and orders as needed and will contain all of the documents required for the operational and safety governance of our operations personnel.
- MBTA Service-related instructions
- Any other documentation governing our operating employees, in compliance with the requirements of the MBTA operating agreement, Amtrak, CSX, Pan Am Railways and the FRA

The Binder will include all of the information stipulated in Schedule 3.1 of the RFP as well as the relevant Amtrak, CSX and Pan Am Railways operating rules and operational instructions.

Once this document has been approved by MBTA and is in use by our employees, it will be managed, monitored and kept up-to-date by our TMs. This effort will include regular contact with Amtrak, CSX and Pan Am Railways to ensure that our information about their timetables, rules and instructions is current.

We will also perform frequent visual inspections of employees' manuals in the field and as part of pre-departure fitness for duty checks.

A binder of this type is in use in our VRE service and is described in more detail in the following case study and in Appendix 6-4.

6.A.4. On-Board Revenue Collection, Revenue Reporting, and Security and Revenue Accounting

We have undertaken a number of initiatives in order to prepare this part of our proposal and have made the following determinations:

- Daily revenue reporting will be incorporated into daily train-by-train performance reporting. Closer on-train observation and monitoring of train crew personnel is essential and will be conducted frequently, both in order to pinpoint training opportunities and, less frequently in our experience, to identify individuals not

CASE STUDY: VRE Service Instruction Binder

An example of our approach to the development of this type of critical safety and train operations-related documentation is the VRE Service Instructions Binder, effective July 1, 2012, governing the Keolis operation of the Virginia Railway Express commuter rail trains. This binder is issued to all Keolis operating employees working in the VRE Service. Because of page limitations for this proposal, we are not including the entire 123-page VRE document. We have included, however, as Appendix 6-4 to this Plan, the Table of Contents from the VRE Service Instructions, so that MBTA may be aware of the type and extent of the information which will be provided to our employees in the MBTA Service. We will make copies of the entire VRE Service Instructions Binder available to MBTA upon request.

In the application of documents governing MBTA train operations, the hierarchy or order of precedence as is customary in railroad practice will be:

1. Operating rules
2. Timetable special instructions
3. System special instructions
4. General orders
5. Bulletins/notices
6. Instructions of the train

following ticket verification/sales procedures and/or handling revenue improperly.

- Other methodologies we will employ include periodic train-by-train sweeps by four-person teams of assistant conductors and the use of outside, undercover-surveillance personnel trained in the ticketing/fare collections.
- An outside, independent auditor will conduct frequent, unannounced audits of ticket selling and fare verification by our train crews.

We believe that the issues of revenue collection and reporting, revenue security, revenue accounting and all other ticket sales and revenue issues have both train operations and customer service components:

- Train operations, because the on-train ticket sales are done by train crew personnel
- Customer service, because revenue collection and ticket verification must be done in a manner that maximizes revenue but embraces the principles of good customer service

During Mobilization, we will carefully review the existing programs in these areas to determine strengths and areas of improvement, before formulating our own draft programs for MBTA approval. It is not our intention to try to reinvent critical programs and procedures during Mobilization in this or in any other area of daily operations. Rather, our plan is to identify areas of improvement in given systems and/or service areas and be ready to address them immediately once our operation of the MBTA Service begins. At this point, we have determined that the training of conductors and assistant conductors in the fare structure and its variations, as well as the timing of each individual crew member's passages through the train, are important areas where significant improvement can be achieved. The important message that we will deliver consistently and frequently to both our employees and the customers is that proper ticketing and fare collection are very important to MBTA and a top priority. The procedures in place will be relevant, staff will be properly trained, and the system will be enforced.

Revenue Protection Policy

Our goal is that, through the various distribution mechanisms, passengers travel on the MBTA Service having purchased a ticket before boarding the train. If it is not possible to purchase a ticket, our goal will be to ensure that the proper revenue for the trip being taken is collected.

We also recognize the importance placed by customers who do purchase tickets on seeing that we take effective measures to ensure that fare-evasion is detected and dealt with appropriately. Our experience in commuter rail services is that customers have a positive feeling about a fare-collection policy that is enforced consistently and effectively.

Maximizing Revenue Collection

In the international contract commuter rail operating environment, contract operators are often required to assume revenue risk; that is the case in the four commuter rail franchises which Keolis operates in the UK.

In such contract situations, Keolis is not reimbursed for its costs, but rather for its costs less revenues, which Keolis keeps. The amount of reimbursement, or subsidy, is capped by the amount of subsidy requested in the contract operator's price proposal. In other words, failure to protect revenue and to maximize its collection can lead to more than an annoying penalty; it can lead to actual financial loss for the contract service provider.

We will bring this international corporate experience to bear during Mobilization to ensure that we are maximizing MBTA's revenue as we prepare to assume operational responsibility for the Service.

During Mobilization, we will work with MBTA to review the existing revenue collection methods and identify areas for improvement. We will assess new practices for appropriateness, prepare for implementation and implement them upon MBTA's approval. As a part of this area of our responsibility, we will be prepared to work with MBTA to expand ticket and pass purchase locations and options. We will work with MBTA

to address any interface fare/ticketing concerns that may exist between the MBTA trains and the MBTA's light rail and bus operations.

In addition, we are also prepared to work with MBTA to automate on-board fare collection and introduce the ability for passengers to purchase tickets with credit cards on the trains.

Key elements of our revenue management system will include:

- **Training** — The first step in ensuring the quality and thoroughness of any fare collection program is certifying that all personnel are properly trained and knowledgeable about the ticketing system. Train crew personnel will be fully trained to collect and account for revenue and to verify the validity of all passes and ticket stock.
- **Communication** — Transportation managers will discuss fare collection regularly with the train crews, working to learn of obstacles to complete ticket inspections. We will respond in each circumstance to determine the root cause of the problem and how to resolve it.
- **Management Audits** — Trains will be "swept" several times a year by both managers and special revenue-collection teams to emphasize proper revenue collection procedures to employees and customers alike. Teams of management personnel will be trained to conduct these exercises, to recognize fare collection problems and to instruct train crew personnel, if necessary, in proper fare collection procedures.
- **Outside Independent Audits** — will be implemented by a specialty audit firm trained by us in the MBTA fare collection/ticket selling system and performing their audits unannounced, on at least a quarterly basis.

6.A.5. Service Monitoring

Service monitoring begins with the General Manager and will be the responsibility of every manager. It will be more than merely "monitoring" however. Following the guidance of **Moving Further Together**, it is more appropriate to characterize this management function as **Awareness**, **Response** and **Resolution**.

We believe that to ensure those tasks we will need training, participation and record keeping.

Awareness and Recognition Based on Training

Our training in this regard will be focused on preparing our crews to have a very fast, very positive first reaction to any situation that appears to be leading to a compromise of safety and/or security for our passengers and/or employees, a possible delay/disruption to the service and/or any sort of threat to the MBTA system or property. Our attempt will always be to stop the problem from occurring, to minimize and/or eliminate a problem that has occurred and to prevent any sort of recurrence. It is often easier to solve a problem when it is small and before it becomes too complex.

Managers will be trained and encouraged to respond to situations and, wherever possible, "fix them forever." We will share our best practices internally with all managers.

Crews will be trained to communicate situations promptly, thoroughly and accurately, so that the management response is appropriate in each circumstance.

Response

There will be a daily morning conference call, which will feature a detailed discussion of how the service performed the previous day and what needs to be done to make it better. While Transportation and Customer Service will lead this call, all departments, including the Mechanical and Engineering Departments, will participate in the call and MBTA representatives will be invited to attend.

There will always be issues that will not be solvable in a single call, e.g., the performance and safety concerns associated with "slippery rail", delays associated with holidays and seasonal events, such as Patriots' Day and summer weekends on the North Shore, etc. In response to these types of situations, we will perform a thorough analysis

of the historical ridership and train performance associated with all holidays and seasonal events, and we will develop more efficient crew and equipment cycles designed to provide more reliable service under these circumstances. We will also investigate suggesting adjusted schedules for these events. In short, we will respond to every service event and every service situation that compromises — or has the potential to compromise — service safety and security, reliability and/or performance.

Resolution and Record Keeping

Once a situation is resolved a very important part of Service Monitoring is keeping records of what happened, what we learned from the event and what we have to do to prevent its recurrence. This, by definition, creates a continuous improvement process, one that is impossible to use as a management tool, however, without accurate, effective record keeping.

We will put into place a reporting system that is in full compliance with both the requirements of the operating agreement and the basic principles of good service management. Both MBTA and our management will have a complete report of the previous day's service at the time of the morning conference call.

Our methodology for assuring the proper documentation, recordkeeping and reporting of the operating services that we will provide to MBTA will encompass all of our activities in the areas of:

- Training
- Operations reporting
- Quality assurance
- Customer Service issues
- Complaints

To accomplish this, we will implement a management information reporting system tailored to the reporting needs of the Transportation function and commuter-train operations. This system will collect and maintain the records for the following service-related functions:

- Train performance
- Delays
- Weather (important to an analysis of operations)
- Ridership
- Accident/incident investigation and reporting
- Train and engine crew assignments
- Operational tests and inspections
- Documents related to FRA and other regulatory agencies
- Drug and alcohol tests
- Fitness for duty checks
- Grade-crossing and pedestrian Near Misses
- Employee training, qualification and certification

6.A.6. Performance Analysis and Reporting

Performance analysis and reporting is a key factor to ensure a quality service for our customers. Therefore our approach to Performance Analysis and Reporting will be focused on:

- Collecting high quality data and applying innovative analytical tools to this information
- Understanding what the data tells us and turning the results of this exercise into a useful management tool
- Communicating this information to everyone

All Transportation Managers will work closely with Customer Service in support of this overall program of Performance Improvement through our Joint Performance Improvement Program, which is described in detail in Section 7 Customer Service Plan.

Performance reporting cannot be effective without a comprehensive data gathering and reporting system as part of this overall process, which we think is essential to **Moving Further Together** in the areas of service excellence and customer satisfaction.

Management focus and attention on delay causality, delay analysis and reporting/ recordkeeping will enable us to deliver a more consistent service through reduction of delays

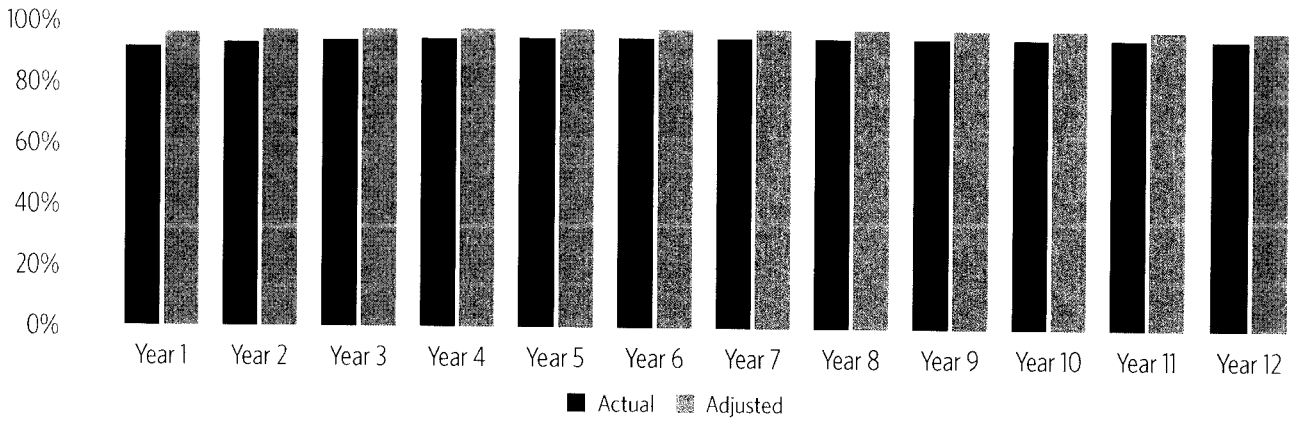


Figure 6-23: Actual On Time Performance Curve

because we will know what caused them and we will know how to eliminate those causes.

An ambitious and realistic improvement plan will focus on management analysis and follow-up for every train delay—starting with the General Manager and all direct reports involved in the daily delivery of the MBTA Service. This process will be dependent on our new Information Technology system, which will provide more accurate and timely delay-related information and reporting data to our management team.

Figure 6-23 shows our expected results for On Time Performance improvement.

This will be achieved through reductions in different types of delay causes as shown in Figure 6-25.

Our approach will be to improve actual on time performance, which is what the MBTA's customers experience and which will increase customer satisfaction and help to increase ridership. Our target is for 95% actual on time performance and 98% adjusted on time performance by 2019.

As discussed in Section III above, the overall performance of the MBTA Service has not improved over the past decade, with three very distinct trends contributing heavily to this situation:

- **Most customers are affected by small train delays**. 2012 data, as represented below, indicates that short delays are more common than long delays and that a majority of delayed trains are affected by only one cause of delay (Figures 6-25 and 6-26). The most efficient way to improve OTP therefore is to identify and eliminate small daily delays.

	2012		Target		
Delay Type	Delay Minutes	Percentage	Delay Minutes	Percentage	2012 to Target
Engineering	43588	29%	24500	27%	-43%
Equipment	36887	25%	24000	27%	-35%
Extraordinary	26211	18%	17000	19%	-35%
Passenger	19544	13%	11500	13%	-41%
Transportation	21872	15%	12500	14%	-42%
Unspecified	134	0%	100	0%	-25%

Figure 6-24: Target in Delay Minutes

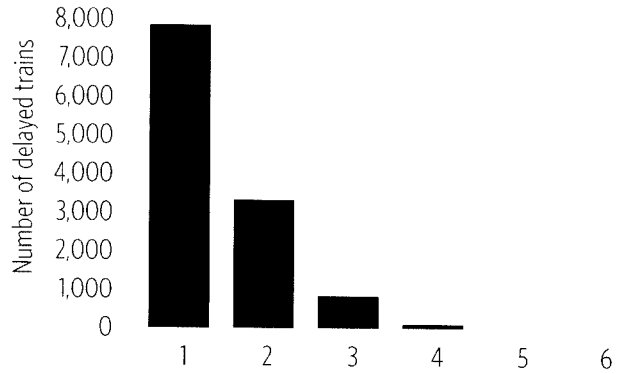


Figure 6-25: Number of Delays Contributing to a Delayed Train

- **On Time Performance By Line Is Uneven.** Some lines achieve OTP above 95%, while other lines record much lower levels of OTP, especially the Rockport/Newburyport lines and Fitchburg lines (see Figure 6-27). When we compared each line for causes of delay, we found that some delay categories are higher on specific lines. Delays attributed to Infrastructure and Passenger-Related are more prevalent on the Rockport/Newburyport Line. We benchmarked each line for its level of delays to establish what could be the performance goal, using a standard of Delay Minutes per 10 hours of operation. This allowed us to normalize Delay Minutes and to compare the performance of each line.

Figures 6-28 and 6-29 are examples of the number of delay minutes per 10 hours of operation for two categories of delays: Extraordinary Events and Transportation. One example of comparison is on the Haverhill Line, where the incidence of delays attributed to Extraordinary Events is low but those attributed to Transportation are high. Those figures are for year 2012.

Note: Extraordinary delays include Weather Related, Slippery Rail, Police/Fire Initiated Activity, Other extraordinary delay, Trespassers, Obstruction in Right of Way, Utility Failure, Fatality, Debris, Fire - Railroad Property; etc.

There is a High Level of Unrelated Delays. In analyzing the MBTA-provided data, we found a high number of unrelated delays which are not precisely linked to an incident. This means that for each incident the data does not allow us to measure the full impact on OTP and that for numerous delays we don't know exactly what the original reason is. This is particularly true for equipment failures (Figure 6-30).

Data Acquisition and Analysis

The acquisition and analysis of data is an essential element of effective management. Data organization is the most important prerequisite of analysis. We will use a system of data gathering that can relate the nature of occurrences, incidents, and general information to their time, location, train, train crew, weather, customer complaints or praise and other relevant factors.

Data will be reviewed every day during the daily service review meeting to ensure thorough, prompt management follow-up.

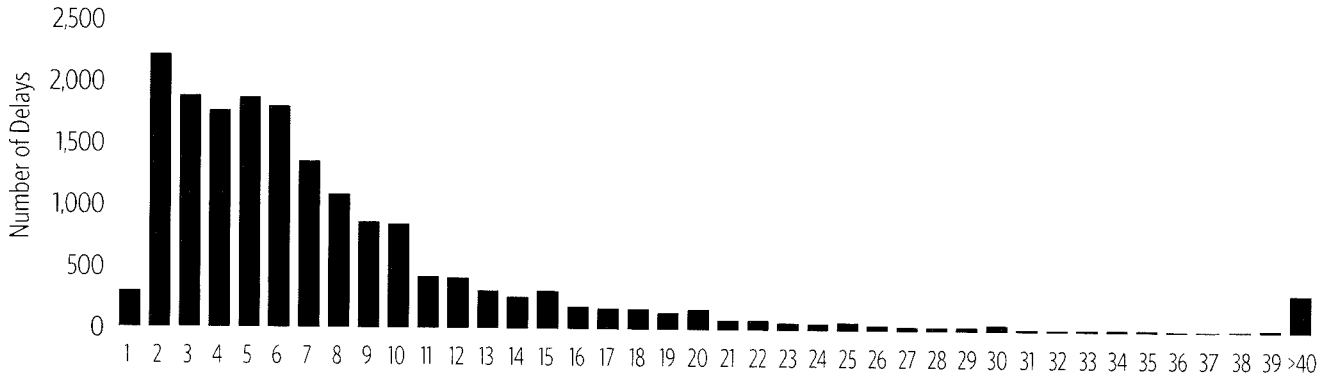


Figure 6-26: Minutes of Delays

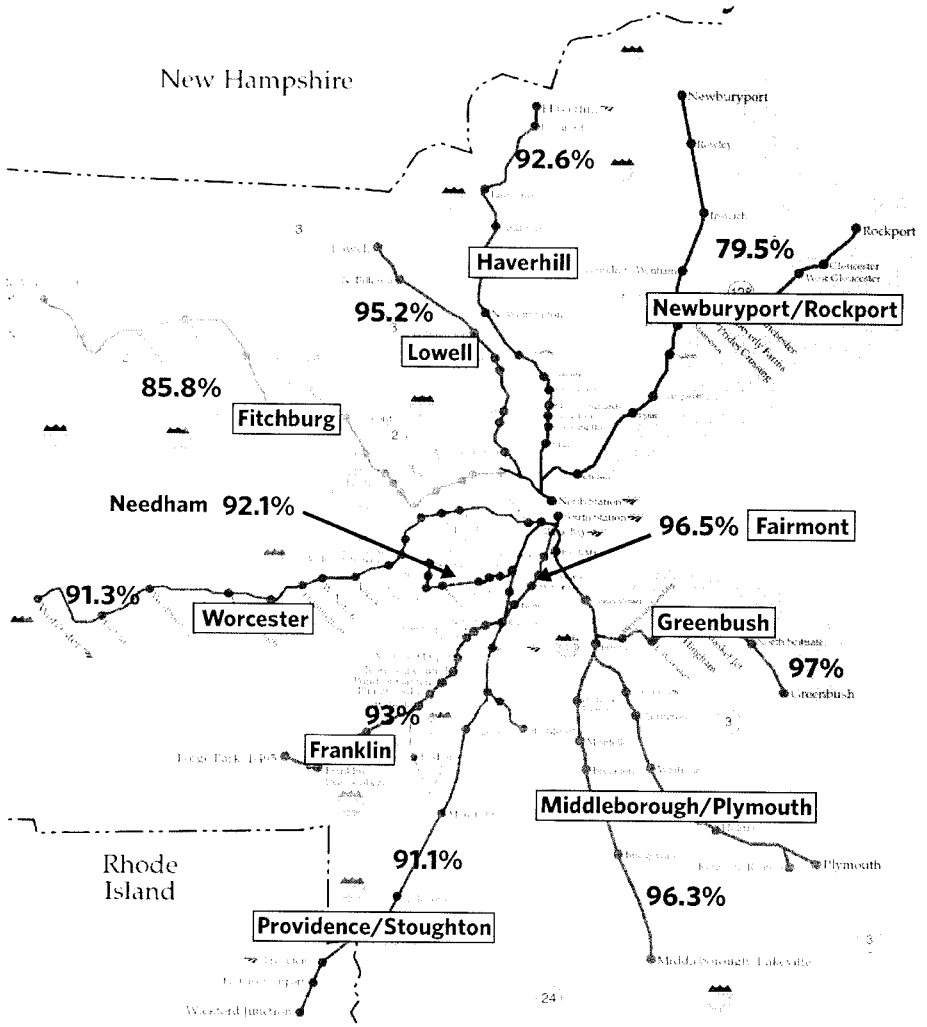


Figure 6-27: Performance by Line for 2012

When data is organized in this manner, it is possible to establish trends and cause-and-effect relationships. We can also correlate conditions, events or complaints to specific trains, personnel and external conditions. Cause-and-effect relationships are an important part of developing solutions. Trends are an important part of proactive management.

Trend analysis will provide both MBTA and our management the necessary information required to develop or modify established practices and training programs.

For example, currently 30% of delays are shown as residual delays. We will develop an approach that provides more information and ties any residual data to the original delay cause. This information will refer to the original cause of each delay and will complete the existing information with more accurate and usable data.

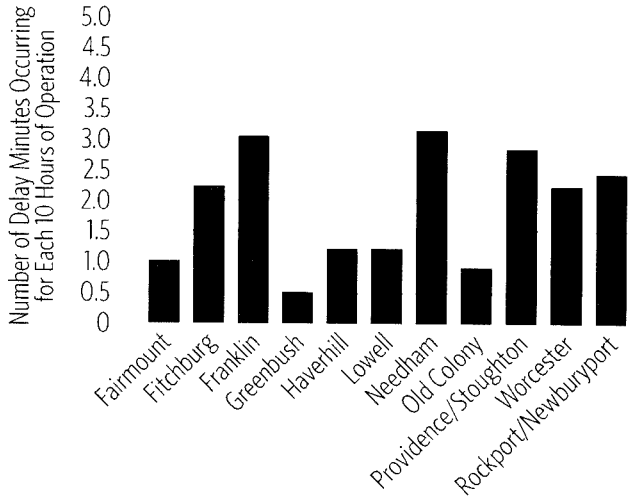


Figure 6-28: Extraordinary Event Delays

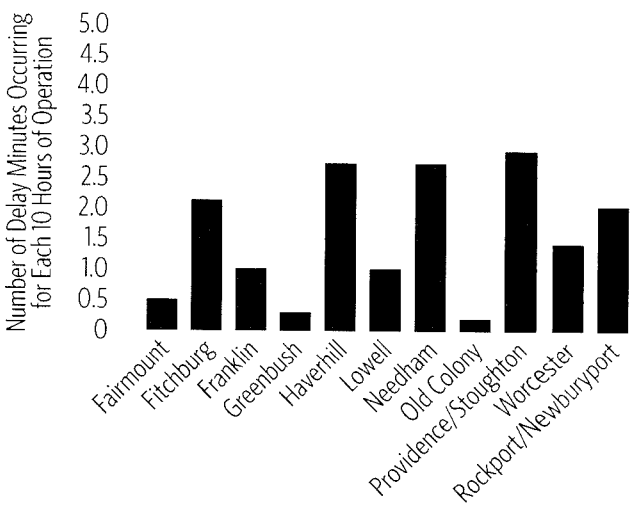


Figure 6-29: Transportation Delays

	Engineering	Equipment Failures	Extraordinary Events	Passenger Caused	Transportation	Total
Residual	25%	56%	33%	11%	8%	30%
Other than residual	75%	44%	67%	89%	92%	70%
Total	100%	100%	100%	100%	100%	100%

Figure 6-30: Unrelated Delays

This approach to improving on time performance has worked well for both Keolis and SNCF in other services, as demonstrate in the following case study.

CASE STUDY: On Time Performance — Eliminating Background 'Noise' Improving Customers' Experience

Keolis and SNCF use the following methodology to analyze train delays and establish an effective improvement plan (Figure 6-31).

The aim is to keep track of the green zone and prepare for the black zone, but channel day- to-day management effort into the high-frequency yellow and red zones. That means targeting not only the high-impact incidents but also the background noise - problems that might appear small in isolation but which in aggregate have an ongoing, adverse impact on punctuality and customer satisfaction.

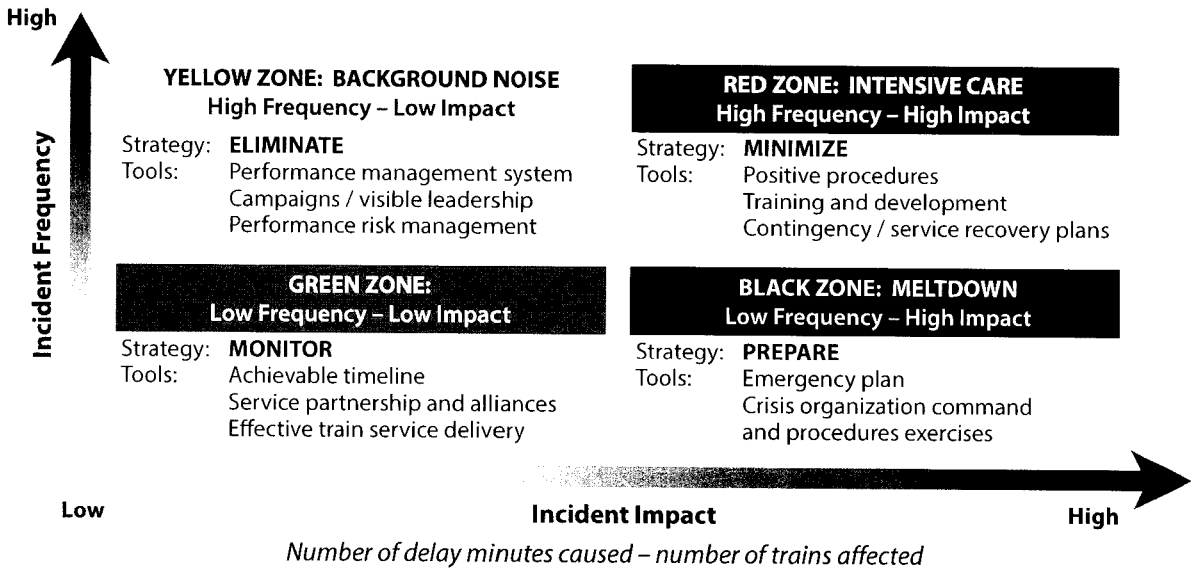


Figure 6-31: Methodology for Analyzing Train Delays

While the delays by themselves are important, it is more important to be able to connect them to the initial problem to fix the cause of delays. We will use and enhance the GPS technology to track trains and detect delays, from which we can ascertain the cause of the delay. As a result, we'll have more accurate data and usable reporting of Delay Minutes.

Reporting and Transparency

The Chief Transportation Officer and staff will be accountable for the creation and provision of all required reports regarding the operation of the MBTA Service.

During Mobilization, we will meet with MBTA staff to discuss and finalize the required format for these reports, along with the information to be contained in each of them, pursuant to the various requirements of the RFP, so that MBTA has complete and comprehensive service and performance information about the service at all times.

To fulfill those important informational requirements, we will adapt the existing reporting system during Mobilization to fulfill all the Customer Service and operational reporting requirements for the system.

In summary, our reporting system will have the capability to provide, without limitation, the following transportation services-related reports:

- Ridership by train, route, etc.
- On-time performance
- Daily train and engine assignments
- Train consist information
- Delay causality, location, duration, etc.
- Unusual occurrences
- Hazardous conditions encountered
- FRA-required testing, e.g., Drug and Alcohol, Operational Test and Inspections, etc.
- Service disruptions/train cancellations
- Accidents/incidents
- Customer complaints
- Training reports

6.A.7. Training

We will develop and implement a thorough, comprehensive training program for all Transportation department employees that will focus on technical competency, required qualifications and certifications, refresher training, customer service excellence and personal improvement. While much of this training will be performed by the internal resources within Transportation, as shown in Figure 6-32, additional training will be provided by the Safety , Customer Service and Human Resources Departments, as follows:

- Security, emergency preparedness, and emergency response training will be administered by the Safety Department.
- Specific operations-related training, including operating rules, engineer and conductor qualification and certification training will be performed by the Transportation Department.
- Customer Service training will be administered by the Customer Service Department
- Fundamental training, including contractual familiarization, will be administered by the Human Resources Training department.
- Individual development training will be organized by the Human Resources Training department.

Training Content	Training For
Engineer training	Engineers and transportation managers
Safety training, Hazard awareness and identification, emergency preparedness and response	All transportation department employees and managers
Operating rules, communications procedures and protocols, equipment familiarization physical characteristics	Engineers, conductors and assistant conductors
Customer service and revenue protection	Engineers, conductors and assistant conductors
Quality and performance	All transportation management
Train riding — what to look for, what/how to report findings	All managers

Figure 6-32: Training Content for Transportation Services

By the end of our first year operating the MBTA Service, this training will also be performed by training resources in at least two community colleges, Bunker Hill and Roxbury.

Training Enhancements

As a true safety enhancement for the MBTA service, at KCS expense we will provide a training simulator for locomotive engineers, Transportation Managers and student engineers (Figure 6-33). The simulator will allow anyone using it to experiment with various operational scenarios, including different signal, traffic and weather conditions.

Utilizing a library of sounds and virtual objects, a wide variety of situations that may be encountered while operating a commuter train can be presented to whoever is operating the machine, using real life throttle and brake controls presented both audibly and visually.

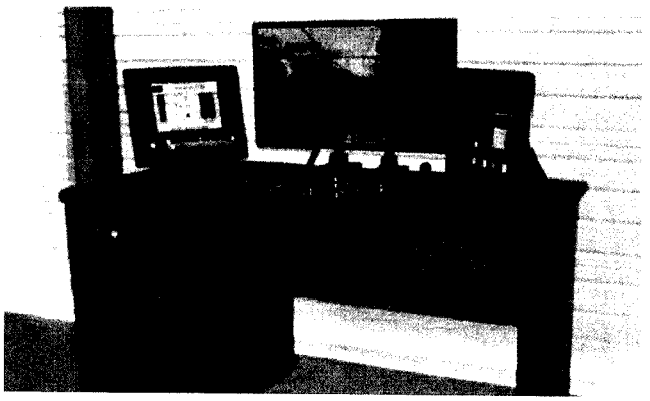


Figure 6-34: Compact Desk Simulator

6.A.8. Integrating New Technologies and Work Practices as Introduced by the Operator or the MBTA

The transportation function will benefit from both new technologies and new work practices. The primary manifestation of new technology will be the introduction of a Corys Thunder, Inc. training simulator, described in the preceding section, which will be acquired by us during Mobilization, will be housed on the MBTA's property and will be used in the training/certifying and recertifying of all our locomotive engineers working in the MBTA Service.

The use of state of the art training tools, such as the Corys simulator, will, we believe, result in a more consistent, more uniform train handling performance by our engineers, which will produce a smoother, more comfortable ride for our customers. In addition, the application of the VIRIATO and Qnamic scheduling/resource utilization tools will enable us to deploy crews and equipment much more efficiently.

Finally, new duties, as discussed at the beginning of this Plan, will focus upon the increased responsibility and accountability of every operating crew member, through the development of and adherence to their personal safety plans and other related initiatives aimed at enhancing customer service and creating a more pleasant environment on the MBTA's commuter trains.

6.A.9. Enforcing Third-Party Warranties

While this function would not typically be a primary responsibility of Transportation, we feel that we can contribute to the overall effort of the other departments in this regard, especially through detailed reporting of any problems or defects with new and/or rebuilt locomotives and coaches that are under warranty. Conductors and engineers will be required to report on-train defects promptly and in detail, both so that repairs may be made as soon as possible for improved Customer Service and so that a record of the defect may be made for reporting purposes. Transportation Managers will discuss this responsibility regularly during crew briefings.

6.A.10. All Reporting Required by US DOT, FRA, EPA, MDTE, APTA, FTA, and Other Applicable Laws, Rules and Regulations

All reports required by any regulatory agency having jurisdiction will be the responsibility of the Director of Safety and Security. As several of these regulatory requirements involve the MBTA, we envision a collaborative effort during Mobilization to determine the entire range of reports and reporting agencies with which we will have involvement.

As the primary agency with jurisdiction over rail operations on the general railway system of the United States, full compliance with applicable

FRA regulations and reporting to the FRA will be our primary objective. During Mobilization, we will be responsible for the development, submission to the FRA and implementation of all FRA-required plans and programs, including, but not limited to:

- 49 CFR Part 213 — Track Inspection and Safety Standards
- 49 CFR Part 214 — Railroad Workplace Safety
- 49 CFR Part 217 — Program of Operational Tests and Inspections
- 49 CFR Part 218 — Railroad Operating Practices/ Blue Signal Inspection Plan
- 49 CFR Part 219 — Program of Drug and Alcohol Control and Testing
- 49 CFR Part 220 — Railroad Communications Procedures
- 49 CFR Part 225 — Railroad Accident/Incident Reporting
- 49 CFR Part 227 — Occupational Noise Exposure
- 49 CFR Part 228 — Hours of Service of Railroad Employees
- 49 CFR Parts 229-232 — Railroad Locomotive Safety Standards and Inspection
- 49 CFR Part 238 — Passenger Equipment Safety Standards
- 49 CFR Part 239 — Passenger Emergency Preparedness Plan
- 49 CFR Part 240 — Locomotive Engineer Certification Program
- 49 CFR Part 242 — Conductor Certification Program
- 49 CFR Part 270 — System Safety Program

Once approved by the FRA, these documents will govern our management plan for assuring that our operation of the MBTA Service will demonstrate maximum safety and operational excellence at all times. These programs will govern our management and monitoring of our employees working in the service.

6.A.11. Ticket Office Staffing, Operation and Maintenance

We will place this function under the Customer Service Department. Accordingly, it is described in Section 7 Customer Service Plan.

6.A.12. Incident Management in Order to Minimize Safety Hazards and Service Disruption

Our plan will include the following elements:

Incident Management Process

On a twenty-four hours-a-day, seven days-a-week basis, the initial response to any accident/ incident and/or emergency will come from CROCC or CETC.

In each case, the Assistant Chief Dispatcher will direct the first stages of the response and will notify the appropriate Transportation Manager, on duty at all times on both the North and South Services, to provide the initial response.

The next step will be to determine the severity of the situation and call for emergency response units as necessary, and then notify our management and the MBTA. To the extent that an Incident Commander is necessary, the Chief Transportation Officer or his/her designee at the time will designate that individual, who will serve in this role until properly relieved.

Governing Communications Procedures and Protocols

All steps taken in response to the incident will be pursuant to detailed communications procedures and protocols developed and agreed to in concert with the MBTA Railroad Operations Directorate and the MBTA Police Department. These procedures and protocols will be implemented immediately in the event of a triggering incident and will include frequent notification to the MBTA, up to every 15 minutes depending on the nature of the incident.

Up-to-date comprehensive call lists will be displayed in each train dispatching center and will be tested frequently for accuracy and updated as necessary.

CASE STUDY: Terrorist Attack Simulation

In June 2011 SNCF conducted an exercise to test all processes in response to a terrorist attack. This drill involved with all authorities needing to be involved in such a situation, including French National Security Agencies and specific response teams for nuclear, biological and/or chemical attacks.

Such large-scale exercises are conducted at least annually, with smaller-scale events held more frequently (Figures 6-34 and 6-35).

Figure 6-34: Special Relief Team in Action

Figure 6-35: Beds Ready for Victims

Service Recovery Trains

Pursuant to the requirements in the Operating Agreement and consistent with the urgent need to restore the service to safe, reliable operating capacity as quickly as possible for every incident, service recovery trains will be dispatched upon the instruction of the Chief Transportation Officer or designee. Our incident management process will draw from SNCF's careful planning methodology.

An example of this methodology and how SNCF prepares its operations management to handle an incident is described in the Case Study below:

6.A.13. Customer Information, Complaint Management and Station Information

These important customer service functions will be the responsibility of the Customer Service Department and are discussed in Section 7 Customer Service Plan.

6.A.14. and 6.A.15. Dispatching Services to Include Control of All Trains Subject to MBTA Dispatch Control Operating on the Service Property; and Operation of the MBTA's Two Commuter Rail Dispatching Centers

These two elements of the Transportation Services Plan are discussed together because they are inseparable and an integrated process. Our approach to the train dispatching function for the MBTA's commuter trains includes several initiatives, including:

- The creation of a new management position, the Director of Train Movement, reporting directly to the Chief Transportation Officer, which will have full responsibility for the conduct and performance of both CROCC and CETC

- A renewed emphasis on service performance, reliability and on-time train operations. Our experience riding the MBTA trains over several months has been that too many trains are delayed coming into and going out of the major terminals and that too many trains are losing time en route on a consistent basis. These delays, generally in the range of five-eight minutes, appear to be unnecessary and a combination of inefficient train operation, inattentive train dispatching and lengthy station stops, considering the number of passengers boarding/detraining.
- A transfer of the public information function in CROCC and CETC to the Customer Service Department
- An increased emphasis with train dispatchers on the recording, reporting and initial analysis of all components of train delays
- Expecting train dispatchers to assist in developing solutions to eliminate these delays and improve OTP
- Meeting at least quarterly with Amtrak, Pan Am Railways and CSX to discuss problems, solutions, communications and ways to improve the service performance of all trains sharing the MBTA's rail lines

6.A.16. Provision of Rules and Safety Supervision Services for all MBTA Commuter Rail Lines

The Rules Department will have responsibility for all rules-related training, retraining and requalification. The Rules Department will work closely with the Transportation Managers and the RFE's in the conduct of an aggressive, comprehensive 49 CFR Part 217 Program of Operational Tests and Inspections.

The Safety Department is a separate department reporting directly to the General Manager. It will be responsible for all safety-program development, safety training, frequent safety audits and overall compliance with plans and programs required by regulatory agencies.

6.A.17. Providing Information Management, Material Management, Performance Analysis and Reporting

- Our comprehensive information management plan is described in the Information Technology Plan (Section 9)
- Material management is described in the Management Plan (Section 8)
- Performance analysis and reporting is described in Section 6.A.6 above

6.B. BEST PRACTICES SUPPORT

Our innovations, initiatives and best practices for improving the Transportation function of the MBTA Service are summarized in Figure 6-36 below:

Initiative	Innovative	Best Practice	Beneficial to MBTA Customers	Cost Efficient	Support
Transportation Management					
Better trained, qualified Transportation Managers, at least 50% of whom will be locomotive engineer-certified	✓	✓	✓	✓	6.A.1.
Program of mandatory train riding for TMs and for all managers	✓	✓	✓		6.A.1.
Creation of a culture of safety and customer service on every train	✓	✓	✓		6.A.1.
Train Crew Duties and Responsibilities					
Individual Safety Plan	✓	✓	✓	✓	6.A.1.
Individual Customer Service Plan	✓	✓	✓		6.A.1.
Use of a simulator for locomotive engineer training	✓	✓	✓		6.A.7.
Asset Utilization					
Use of Qnamic and VIRIATO to produce more efficient train schedules, equipment cycles and crew runs	✓	✓	✓	✓	6.A.2.
Performance Management					
Thorough, detailed performance reporting, delay causality identification and analysis, management follow through to improve performance	✓	✓	✓	✓	6.A.6.

Figure 6-36: Transportation Best Practices

SECTION 7
Customer Service Plan
Evaluation Factor Information

SECTION 7 — CUSTOMER SERVICE PLAN EVALUATION FACTOR INFORMATION

Contents

7. INTRODUCTION 2
I. Executive Summary 2
II. The MBTA's Objectives as We Understand Them 3
III. Our Assessment of the Current Situation 3
IV. The Results We Will Deliver 14

7.A. CUSTOMER SERVICE PLAN 17
7.A.1. Providing Prompt and Accurate Public Information 22
7.A.2. Lost and Found Services 30
7.A.3. Planning for, and Handling of, Service Related to Special Events 30
7.A.4. Responding Promptly and Effectively to Customer Complaints and Suggestions for Service Improvements 32
7.A.5. Service Monitoring 35
7.A.6. Performance Analysis and Reporting 38
7.A.7. Integrating New Technologies and Work Practices as Introduced by the Operator or MBTA 41
7.A.8. Provide Information Management, Material Management, Performance Analysis and Reporting 41
7.A.9. All Other Aspects of Communications with Customers 42
7.A.10. Draft Customer Service Satisfaction Plan 51

7.B. BEST PRACTICES SUPPORT 52

APPENDICES ..... Binder 2
7-1 Case Study: Oke Service at Keolis Lyon
7-2 Customer Satisfaction Plan

7. INTRODUCTION

I. Executive Summary

Ridership on the MBTA Service has decreased by 10.5% since 2003, in spite of increasing highway congestion in Boston and new service offerings launched by the MBTA. This decrease is counter to the national trend, where U.S. commuter rail ridership is up 14.7% during the same time period. Our analysis also shows that the MBTA Service has become - despite good intentions - a railway with a narrow user base. Passengers, while exhibiting some degree of loyalty, evidently view the service as inferior and are exiting the system when means allow.

Customer service is a pillar of service quality and passenger loyalty. We believe that the fundamentals of customer service on the MBTA Service can be improved. We will introduce strong, customer-focused leadership and unprecedented levels of training for staff. This, together with an approach to information management that will narrow the gap between customers' home, work and travel experiences, will create a new dynamism for the MBTA Service.

Moving Further Together will be the overall theme of our actions. We want our customers to move further by using our commuter trains more often and not just for commuting. We will do it together, meaning that we will serve local communities not just with our trains but through our staff, and in particular those who are on the front lines of customer service every day, and who serve as ambassadors for our company and the MBTA.

To achieve this new dynamism for the MBTA Service, we will:

- Establish thorough plans for every major aspect of customer service, including:
  - Creating a customer-focused service from Day One by making our managers visible on trains and at stations, allowing them to interact with customers and be proactive in seeking feedback
  - Identifying early initiatives which will start to transform the customers' impressions, such as uniforms, training, cleanliness and service provision
  - Proactively providing customers with better information, including management of delays and disruptions
  - Forging a new relationship with customers by being a better "listening organization" and focusing on relationship-building between managers, staff and customers, and in particular in handling customer complaints
  - Establishing specific metrics for customer satisfaction levels and increasing customer satisfaction levels by 5% in the third year of our operating of the Service
  - Communicating and responding to passengers' needs as they evolve
  - Using new technology to be more responsive to customers, to track and respond to complaints and suggestions, and to track and recover lost items
  - Monitoring of our results regularly and efficiently, in order to manage and continuously improve our service
- Drawing upon the combined resources of the Keolis Group worldwide to stimulate dynamism and innovation in order to achieve consistent and excellent customer service. This specifically includes:
  - Ensuring managers and staff are "hands on," with regular interaction with customers, staff and services in order to measure, improve and control customer service processes
  - Restructuring the Customer Service Team to reflect proactive performance management and monitoring role
  - Mandating regular interactions of our management team with other Keolis Customer Service managers through webinars, online forums and annual meetings to create a community of best practices

We believe that a passenger's experience of customer service has a significant impact on customer satisfaction and the personal decision to travel by train. We will drive improvements that will be immediately visible to the MBTA and its customers. We will develop a Customer Service Satisfaction Plan and subsequent Customer Service Improvement Plans specifically tailored to the MBTA Service rail to ensure continuous improvement of customer service..

We will succeed through employee training, the provision of accessible, accurate and timely information, and innovative approaches to all aspects of customer service. In addition to this, we will base day-to-day operations on our core philosophy of **Think Like a Passenger**. This means that all activities and initiatives implemented in the MBTA Service are assessed against the needs and expectations of our passengers and work towards achieving customer satisfaction.

II. The MBTA's Objectives as We Understand Them

We understand that the MBTA's objectives for customer service are focused around the following main areas:

III. Our Assessment of the Current Situation

As part of our thorough assessment of the MBTA Service, we drew on data from official sources such as the MBTA System Wide Survey 2008-2009, MassDOT and the US Census Bureau. We consolidated this with a customer survey and focus groups we developed specifically for the

MBTA Objectives	Our Response
To identify Proposers committed to implementing innovation in the provision of all regular and special service information.	Improving and sustaining high customer satisfaction is integral to all of our operations around the world. Our motto is **Think Like a Passenger,** which means we always understand and respond to our customers' needs and desires, and always put the customer first. We understand how to measure, improve and manage the key components of effective customer service, and we have embraced a commitment to quality in service delivered to passengers and performed for public transportation agencies. Specifically, we will: • Create the position of Performance Manager in the Customer Service Department; the Performance Manager will also report to the Director - Quality, and will serve as the Quality Assurance Representative for both the Customer Service and Transportation Departments, overseeing each department's Quality Assurance Plan • Implement the Joint Performance Improvement Program (JPIP) in concert with other departments • Work closely with the MBTA to design metrics for the MBTA's annual customer satisfaction survey • Conceive and conduct our own customer satisfaction surveys twice a year • Formulate an annual Customer Service Satisfaction Plan and an annual Customer Service Improvement Plan • Create a performance- and customer-focused culture through strong leadership and management • Partner with local community colleges to launch an unprecedented training program designed to enhance training for all customer-facing staff and management, and to integrate the training regimen across all MBTA services, if desired • Solicit customer feedback through social media • Conduct post-disruption customer surveys • Report to the MBTA with a Quarterly Customer Comment and Complaint Report

MBTA Objectives	Our Response
To identify Proposers that will continuously improve messaging regarding customer and public safety	The distribution of safety and security information is a critical component of customer service. We will instill a true safety culture in the organization, and we will launch a series of initiatives aimed at informing the public about all aspects of safety and security. Specifically, we will: • Create a joint brand specifically for all safety- and security-related information • Create scripting for recorded and live announcements on trains and at stations regarding safety and security precautions and processes • Work closely with the MBTA Police to keep all messaging accurate and consistent • Educate customers and the public regarding Operation Lifesaver, the Anti-Sexual Assault Campaign, and the See Something, Say Something Campaign • Propose that our Director - Customer Service serve on the Board of Directors of Operation Lifesaver
To identify Proposers committed to implementing innovation in the provision of all regular and special service information.	Innovation is central to our approach around the world. Our innovative technologies and best practices have provided improved customer service information to our clients in the United States and 12 other countries. Delivering timely, relevant and accurate information is critical and a hallmark of our success; we will meet and exceed the information-related requirements of the RFP and support customers at every stage of the journey. Specifically, we will: • Create a website that will complement www.mbta.com and provide information targeted for customers • Create a Customer Service Charter to be distributed via print, websites, apps and social media • Complete an inventory of road signage leading up to stations outside of Boston • Train all customer-facing personnel to most effectively distribute real-time and accurate information • Extend staffing hours at Information Booths and the Passenger Train Information System sign desk to ensure the high quality of real-time information • Implement plans for Special Services, Planned and Unplanned Disruptions, and Provision of Alternate Transportation • Provide assistance to passengers with special needs and disabilities • Create a "Riding a Mile in Their Shoes" training initiative to create better understanding of and procedures for helping passengers who need special assistance • Introduce a cloud-based Issue Tracking Portal to track complaints and performance metrics • Consider future innovation in station access, including application of "DEFI," a diagnostic tool used to identify and mitigate barriers to use at stations throughout the Service • Create an application, or applications, in conjunction with the MBTA and local developers for passenger information distribution

MBTA Service, and our own experts' on-train and at-station audits.

The central conclusion from this assessment is that the Service is decidedly average in most areas. The real fare increases in recent years represent a surface issue that only accentuates an underlying decline relative to a national (and international) trend towards growth in rail transit. Our qualitative analysis demonstrates ambivalence to the system from both staff and customers. Our assessment has identified specific areas which we can address to reverse the decline in ridership on the MBTA Service and help raise its profile

Overview of the MBTA Service

- 4.7 million people live within the service area; this is slightly larger than both Melbourne, Australia and the San Francisco Bay area
- Approximately 75,000 commuters board trains daily at stations in over 80 communities totaling nearly 37 million passengers per year. This represents by comparison, only about 16% of Melbourne's similar ridership
- 70% of people are using the MBTA Service 5 days a week
- 91% of all trips are related to work in some way, with "home-based school" (that is, school as either the origin or destination of the trip) a distant second
- The most common reason for using the MBTA Service is "avoid driving/traffic" (81%), with "convenience" (61%) second and "avoid parking at destination" (57%) third
- Most people access the MBTA Service in the suburbs by car (53%), compared with only 36% in Sydney, New South Wales, and 25% in London
- Only 13% of rail cars are less than 22 years old, indicating a severely aging fleet
- There are 39,000 parking bays next to outlying train stations (versus 135,000 in Boston total and 40,000 in the city center)
- Although the MBTA Service serves some tourist areas, such as Plymouth, Salem, Gloucester, Rockport and Old North Bridge in Concord (and Cape Cod on summer weekends), and in 2011, there were 27.4 million visitors in Boston, the MBTA System Wide Survey 2008-2009 indicates only 1.8% of passengers are using the Service as visitors
- 35.6% of users in the MBTA survey occasionally use the Service on weekends; 50% of those surveyed never use the service on weekends

Ridership Analysis

Comparison of National and MBTA Trends of Commuter Rail Ridership: an Unexpected Result

While nationally commuter rail ridership in the United States has increased by 14.7%, the MBTA Service ridership has decreased by 10.5% between 2003 and 2012. This represents a loss of 4.3 million passengers.

Figure 7-1 shows trends in commuter rail ridership. In 2012, the MBTA Service ridership represented 8% of the total national commuter rail ridership—a decline from 10% in 2003. While significant fare increases play a part in this relative decline, they cannot explain all of it. We are committed to reversing this downward trend in ridership.

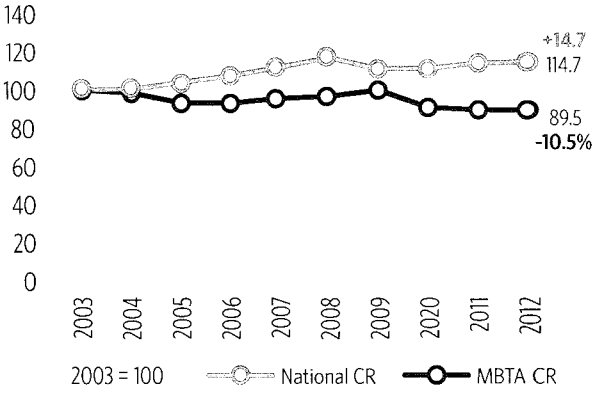


Figure 7-1: National and MBTA Commuter Rail Ridership 2003-2012

Commuter Rail Ridership per Line: Major Decreases

- South lines have suffered greater declines in patronage than North (-13.5% vs. -0.92%), despite increases in employment, income and population. (See Figure 7-2 and Figure 7-3.)

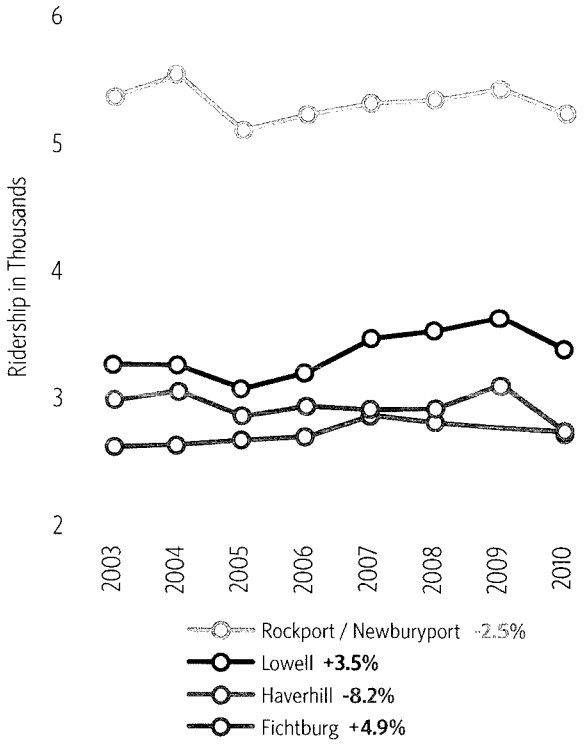


Figure 7-2: Commuter Rail Ridership for the North Lines Sources: MBTA Fleet Management Plan — Annual Commuter Rail Ridership 2011-2025

- Lowell and Fitchburg are the only two lines where the ridership has increased over the seven-year period (+3.7% and +4.9%, respectively, between 2003 and 2010), but even these have declined in recent years (-7% for the Lowell line and -1% for Fitchburg line between 2009 and 2010).

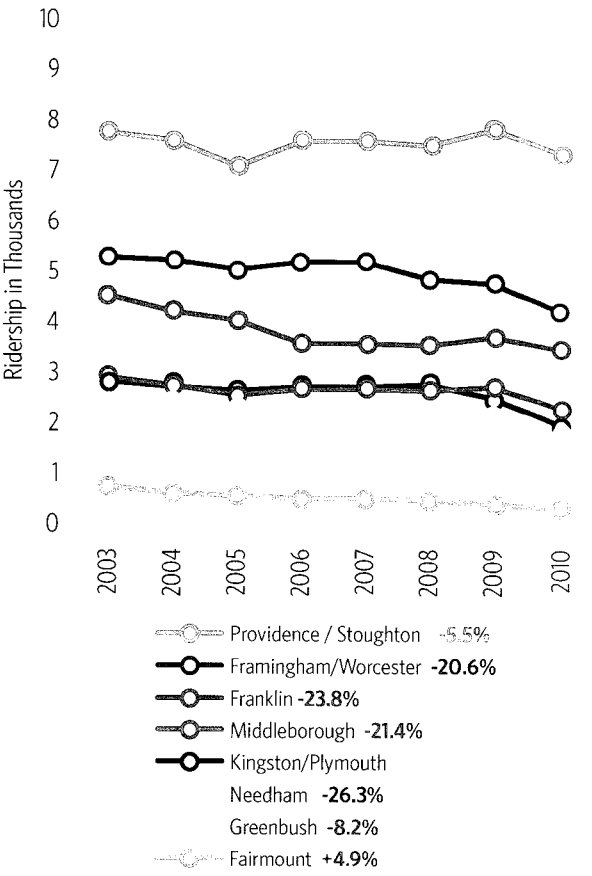


Figure 7-3: Commuter Rail Ridership for the South Line

- Ridership on the Greenbush line has now plateaued from its increases in the first year following its introduction in 2008. Research shows that its patronage has been due more to cannibalization of other transit modes than to new patrons; the largest percentage of Greenbush line riders made the same trip via commuter boat (46.6%) prior to the line's opening. Other users were also diverted to the Greenbush line from the express bus line, but in smaller numbers. The second-largest percentage of riders reported having driven prior to the opening of the line (38.1%).

Revenue Trends: A Relatively Inelastic Rail Market

Figure 7-4 below shows that fares increases in the relatively inelastic commuter rail market have helped to increase revenue per passenger but — in part — at the expense of growth.

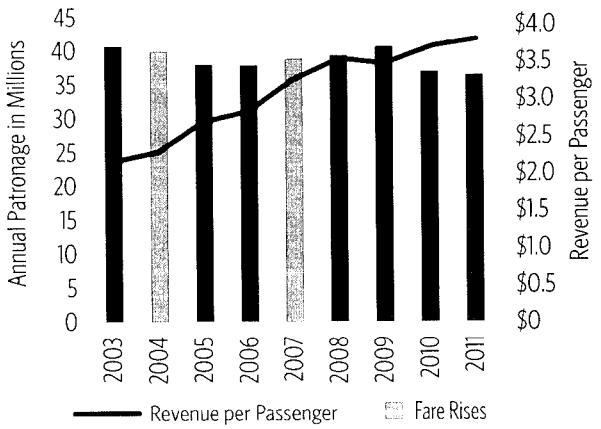


Figure 7-4: Annual Passengers and Revenue per Passenger

Service Assessment

Tools

In addition to using the 2008/09 MBTA System Wide Survey, during the past eight months we have carried out different assessments of the existing service. We have audited the customer experience on many MBTA services during peak hours, off-peak hours and weekends and have held focus groups with specific audiences, including short- and long-haul users and non-users. We also carried out an online survey to provide quantified data. These assessments have significantly informed our thinking in terms of opportunities for improvement.

Online Survey

We carried out a short online survey of users and non-users for a week in November 2012. We had 603 respondents, split approximately 50:50 between users and non-users. There was a slight bias in the non-user group towards retired and 50 or older. Nearly all respondents have access to a car, although a greater proportion of non-users (92% vs. 80%) had permanent use of one. A summary of the sample is shown in Figure 7-5.

		USERS	NON USERS
TOTAL		302	301
GENDER	Male	54%	44%
	Female	46%	56%
AGE	18-49 y. o.	53%	31%
	50 y. o. and more	47%	69%
SITUATION	Working full time	56%	48%
	Working part time	9%	11%
	Full or part time student	13%	4%
	Unemployed	4%	5%
	Retired	16%	30%
	Other	2%	2%
PERMANENT USE OF CAR	Yes	80%	92%
	No	20%	8%

Figure 7-5: Sample Data

Interviewees' Geographical Distribution

Three lines in particular were used by the interviewees for their most recent trip:

- Providence/ Stoughton line: 24%
- Framingham/Worcester line: 17%
- Newburyport / Rockport line: 12%

Figure 7- 6: Geographic Distribution of Interviewees

Users' Door-To-Door Travel (Inbound): Strong Differences Between Modes to Go to the Departure Station and to Leave the Destination Stations

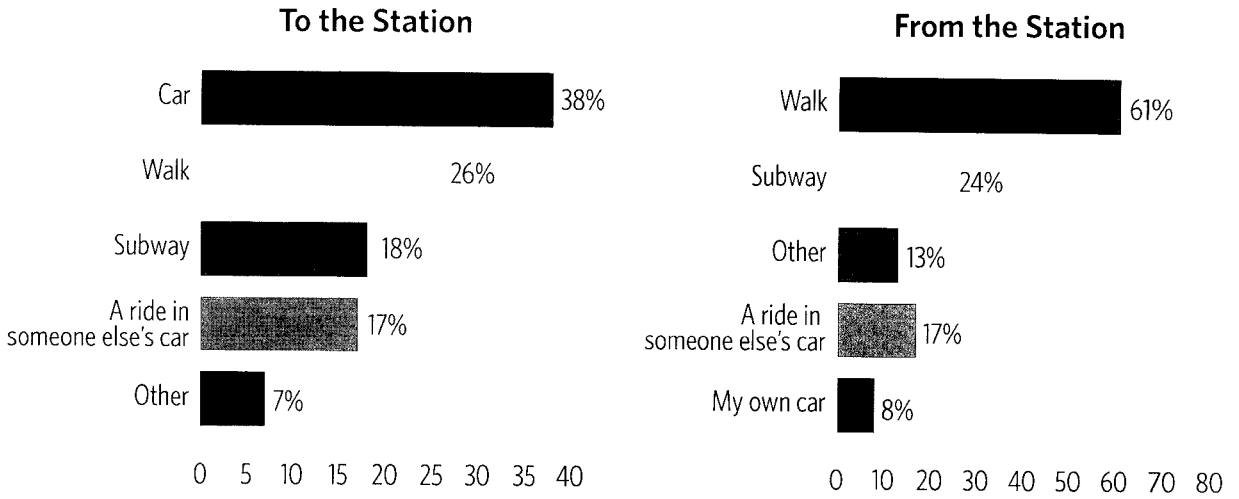

To the Station
Car 38%
Walk 26%
Subway 18%
A ride in someone else's car 17%
Other 7%
0 5 10 15 20 25 30 35 40
From the Station
Walk 61%
Subway 24%
Other 13%
A ride in someone else's car 17%
My own car 8%
0 10 20 30 40 50 60 70 80

Figure 7-7: Users' Door-to-Door Travel Modes

- 55% of passengers access departure stations by car (as a driver or as a passenger)
- 82% of passengers access the station park and ride
- 26% of passenger walk to their departure station

- Most of people don't use another mode to go to their final destination: 61% of passengers walk when they leave the train station
- 24% of passengers are taking the subway to go to their final destination

The results show that the central location of the Boston stations is a major attractor to commuters, since it allows them to walk to their ultimate destination. In contrast, the suburban areas have larger catchments, causing people to use their cars to access the Service. Our challenge will be to provide easy access to stations (e.g., signage, parking facilities) and attractive service in order to ensure that, once in their cars, customers don't simply continue on their journey by road.

Type of Ticket Mainly Used

Figure 7-8 shows the type of ticket used by our sample.

Most of the interviewees use a single ride ticket, which reflects a bias in the sample towards

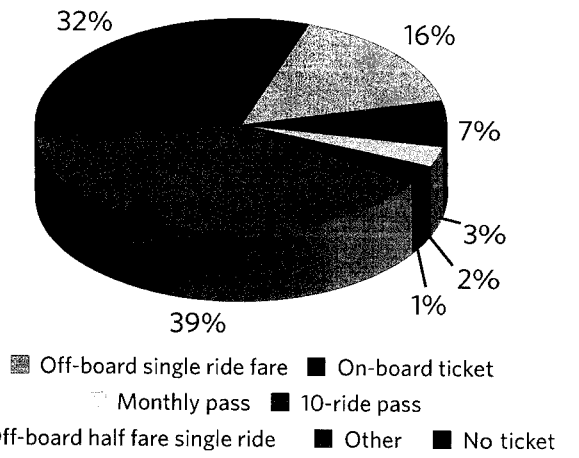


Figure 7- 8: Survey Sample by Ticket Type

occasional users. Based on the MBTA System Wide Survey 2008-2009, we know that 70% of passengers use the service at least 5 days a week, and as such will have a monthly ticket.

Quality Assessment

We have analyzed our survey results for levels of customer satisfaction relating to quality of customer care, station environment and on board trains. Figure 7- 9 shows these results.

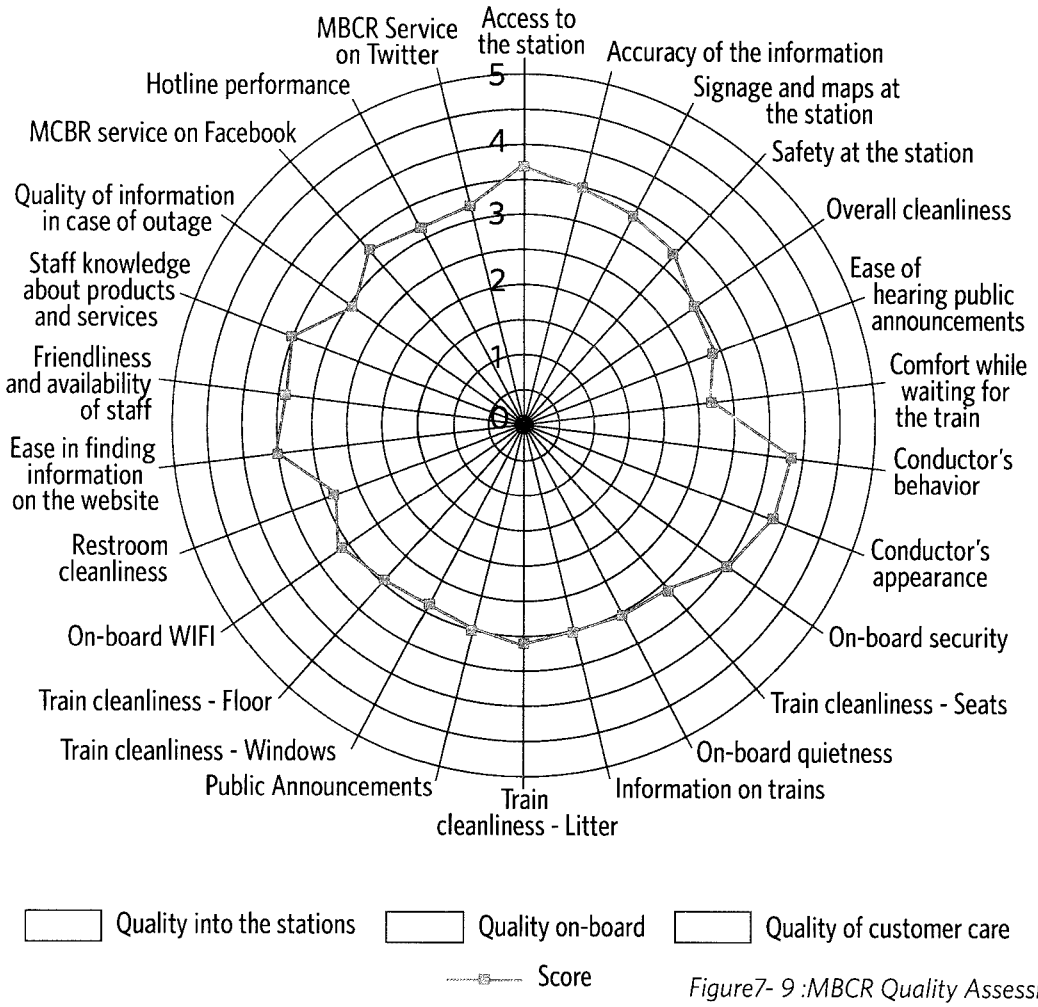


Figure7- 9 :MBCR Quality Assessment

Our survey shows that most of the criteria are rated around 3 on a five-point scale (1-5), establishing a baseline of average satisfaction. Our interest is therefore in areas which are either a) notably different from the average or b) have extremes around that average.

While there are no outstandingly good or bad items, we can say that the following deviate from the average, either positively or negatively:

THE STAFF:
All criteria related to the staff are good, with conductor behavior (3.86), friendliness and availability of the staff (3.34) and conductor appearance (3.81) all scoring slightly higher than average.

ACCESSIBILITY:
Access to stations is good (3.64). The lowest ranked criteria are:

Comfort while waiting for the train	2.69
Restroom cleanliness	2.82
Quality of information in case of outage	2.87
Ease of hearing public announcements	2.89
Train cleanliness - Windows	2.89
Train cleanliness - Floor	2.95
Overall cleanliness	2.96

From this analysis, we can identify four areas for improvement:

- Comfort while waiting for the train
- Cleanliness of trains
- Quality of public announcements
- Information during disruptions

This corroborates the MBTA System Wide Passenger Survey for all lines, which highlights three out of the four areas in need of improvement:

- Cleanliness / condition of vehicles (rating of 3.1)
- Announcement of stations (rating of 3.1)
- Station amenities (lowest rating with 2.7)

Overall Impression

In addition to the criteria described above, we asked respondents to comment on other criteria in order to gauge overall customer satisfaction. The results of this analysis are shown in Figure 7-10.

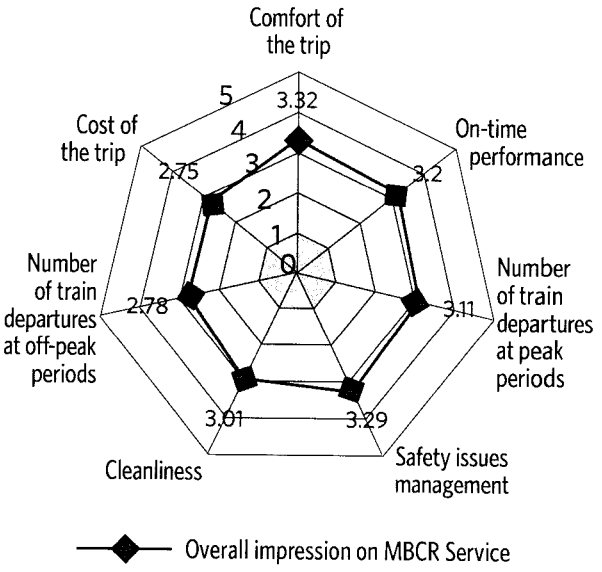


Figure 7-10: Overall Customer Satisfaction

+ Passengers rate the comfort of the service 3.32. This is also confirmed by the focus group analysis and our own experience of "riding the rails". Comparatively, this is better than some other areas, but in reality this is merely "satisfactory" rather than good or excellent

When customers are invited to give their overall impression on different subjects, the three lowest ratings are:

Cost the trip	2.75
Number of train departures at off-peak periods	2.78
Cleanliness	3.01

While respondents consistently mentioned fares, our focus groups specifically revealed concerns with respect to value for money rather than absolute cost: fare rises and a lack of perceived increase in service quality. (See verbatim analysis below.)

The findings from our online survey are supported by the focus groups and our experiences while riding the different services.

Focus Group Feedback

Focus group methodology and sample

We set out the following objectives for our focus groups:

- Understand customers' experience with the current operator, and how that compares to the concept of an "ideal" journey
- Understand attitudes toward the MBTA Service
- Explore the motivations for, and barriers to, using the MBTA Service

The focus groups were held in Boston in February of this year. We held four different groups with regular users of MBTA Service, and two focus groups of non-users:

USERS

Two groups of "long-haul" riders (Zone 3 and up)
- Group 1: ages 30 to 50
- Group 2: ages 18-30

Two groups of "short haul: riders (Zones 1-3)
- Group 1: ages 30-50
- Group 2: ages 18-30

All groups consisted of customers who use Commuter Rail at least two to three times per week

NON-USERS

One group of mixed age and gender, who would be "short-haul" customers

One group of mixed age and gender; a mix of "short-haul" and "long-haul" potential customers

All non-users must have tried the MBTA Service in the past and be open to using it in the future
- None to have used commuter rail more than 2 or 3 times per month
- None to have serious practical barriers to use (financial, geographic)
- No more than two in any group without access to a car for commuting purposes

Main Findings from the Focus Groups

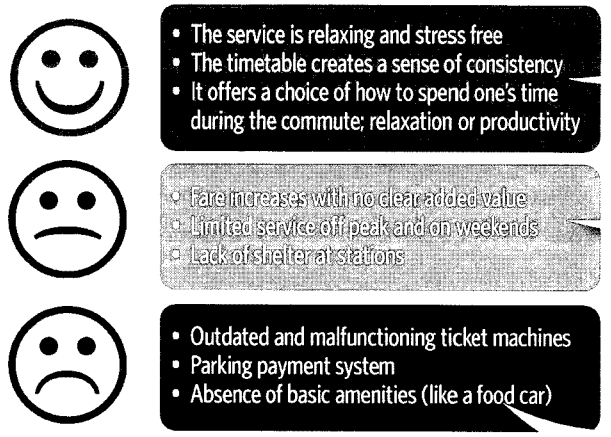

Verbatim
• The service is relaxing and stress free
• The timetable creates a sense of consistency
• It offers a choice of how to spend one's time during the commute; relaxation or productivity
• Fare increases with no clear added value
• Limited service off peak and on weekends
• Lack of shelter at stations
• Outdated and malfunctioning ticket machines
• Parking payment system
• Absence of basic amenities (like a food car)
"Even if the train is delayed 15 minutes, it is still moving while it is getting into town. It may go slow, but at least it is going to get you there."
"That's what is good about public transportation. They are driving for you. You can read, listen to music, catch up on everything else."
"I don't know why it costs so much. The upgrades are not matching the money."
"For the price you pay, there has to be more service. It is like few and far between."
"Half the time the machines don't work. The machines are outdated. Essentially you are paying on board. You can't get a ticket unless you get it on board. It costs $2.00 more."
"Sometimes you have to park and then go to pay and that slip to get the money in is horrible. When it is cold out, that thing is just cold and frozen and it won't take the money very well."

Figure 7-11: User Perspectives

Among users, the MBTA Service is seen as dependable, comfortable, secure, friendly and reliable, but not necessarily up-to-date, clean or frequent, especially in comparison with the subway. **We got the strong impression that the people left using the MBTA Service are those to whom small delays matter less, journey time is not so important and have few other options for travel.** People over 40 years old in the groups had lived in Boston long enough to have seen the deterioration and harked back to the 'good old days'.

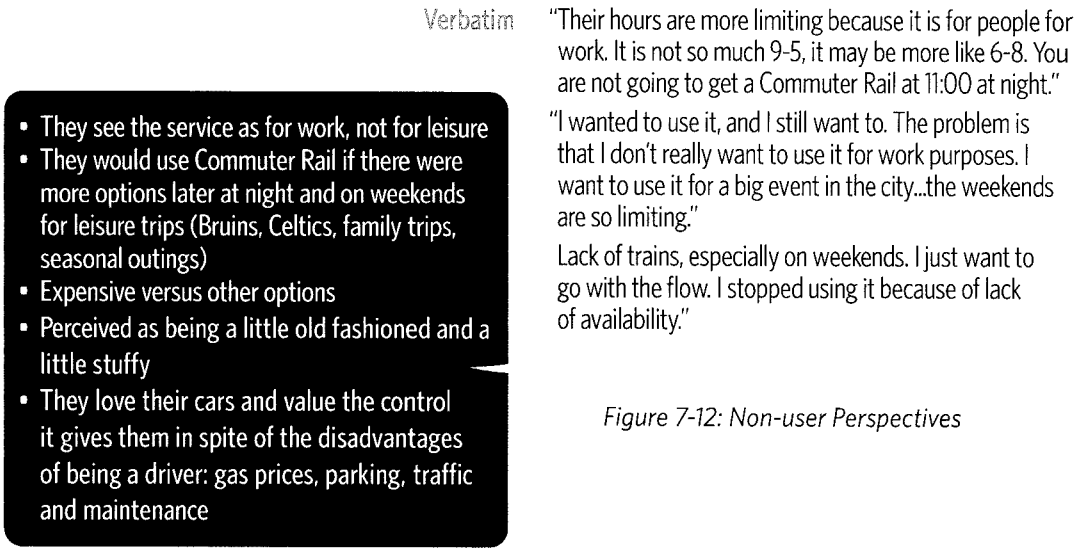

Verbatim
• They see the service as for work, not for leisure
• They would use Commuter Rail if there were more options later at night and on weekends for leisure trips (Bruins, Celtics, family trips, seasonal outings)
• Expensive versus other options
• Perceived as being a little old fashioned and a little stuffy
• They love their cars and value the control it gives them in spite of the disadvantages of being a driver: gas prices, parking, traffic and maintenance
"Their hours are more limiting because it is for people for work. It is not so much 9-5, it may be more like 6-8. You are not going to get a Commuter Rail at 11:00 at night."
"I wanted to use it, and I still want to. The problem is that I don't really want to use it for work purposes. I want to use it for a big event in the city...the weekends are so limiting."
Lack of trains, especially on weekends. I just want to go with the flow. I stopped using it because of lack of availability."

Figure 7-12: Non-user Perspectives

Among non-users, the MBTA Service is seen as unreliable and dirty, with staff that is often rude. (Note that this perception is not borne out by the on-line survey). They also see trains as slow, and stations as shabby and unloved. The price increases without apparent service improvements (in fact, service reductions in some cases) have made the service less attractive.

Conclusions from Service Assessment

In all areas of analysis, in both the MBTA's research and our more recent assessment, scores are merely "average", a score that is unacceptable in the light of recent fare increases. Our customers will want to know that they are being given value for their money. We believe that, despite resource challenges, we have considerable scope for improving customer satisfaction across the board, and we are committed to improving four key areas in our Joint Performance Improvement Plan (JPIP):

- Train cleanliness
- Train reliability and frequency
- Information on board trains
- Customer service interfaces with passengers

IV. The Results We Will Deliver

The Long-Term Results of **Moving Further Together**

We will set new standards for customer service quality for the MBTA Service by defining ambitious service quality metrics and training our staff to deliver on those metrics. We will measure all aspects of the journey experience, drive improvements and confirm that we are delivering what the MBTA and its customers want

We will:

- Ensure we clearly understand our passengers' expectations through customer satisfaction surveys, mystery rider findings and management field surveys
- Work with the MBTA to set targets for service quality and link improvements to those targets
- Match our service quality targets with our customers' needs
- Communicate our service quality and performance targets and results to customers and the MBTA
- Provide passengers with consistently relevant and accurate live information across multiple platforms
- Manage delays for passengers so that they know what is happening and why
- Listen carefully to what passengers say, and learn from what they tell us

We have aligned our objectives to those of the MBTA to encourage accessibility for all to our network and deliver improved integrated transport opportunities. Our initiatives are in line with:

- Maximizing customer satisfaction
- Continuously improving messaging regarding customer and public safety
- Implementing innovation in the provision of all regular and special service information

The most important lever we will use to achieve these results is our Director - Customer Service and the rest of the local management team, which is made up of a group of diverse individuals who have invaluable experience in managing passenger rail services similar in size and complexity to the MBTA Service.

The organizational structure we have chosen for the Customer Service Department, with a renewed focus on quality and performance management is the second lever which will allow us to deliver on our commitments. We will manage customer service through clear lines of authority, unambiguous reporting relationships, minimal layers of managers and responsibility tied to accountability.

We will focus on improving employee engagement and motivation, increasing managers' skills and leadership abilities, and working in partnership with the unions. As described in the Customer Service Plan below, the programs and initiatives we are proposing will allow us to ensure that each and every one of our employees will **Think Like a Passenger**, thereby changing the culture of the

organization to be performance and customer service-focused, starting on Day One.

A New Day on Day One

Our results will be evident from the first day that we take over the service, which we call "A New Day on Day One." We will begin with a comprehensive Customer Service Immediate Action Initiative, with specific actions to be launched on July 1, 2 and 3, 2014. As described in the following, these actions will be highly visible to customers, who will experience a noticeable change in how we and the MBTA Service are **Moving Further Together**.

Staff Initiatives

Managers — We will create an "all hands on deck" approach to our first three days of operation. We will have managers from all of our departments riding at least one train on every line in the morning and evening rush hours.

Each manager will:

- Wear a special, visible uniform or vest with a tag including name and position
- Hand out contact cards to passengers
- Distribute copies of our Customer Service Charter

Conductors and Assistant Conductors — Conductors and assistant conductors will be wearing new uniforms and new badges, including special badges for those who speak more than one language. This will show the additional skills of our staff, and make them feel pride in the job they do.

Customer Service Representatives — In addition to assigning Customer Service Representatives to ticket booths, information booths, and Lost and Found offices as required by the RFP, we will also rotate all CSRs to spend a set amount of time each day greeting passengers at South, North and Back Bay Stations. They will also hand out contact cards and Customer Service Charters (described in our Customer Service Plan) to customers.

On Board and at Stations

Operation Deep Clean — We will coordinate the deep cleaning of one entire train set on the South and North lines between the hours of midnight and 5:00m on July 1. These trains will be "showcase trains," and will be sparkling signals that a new day on the MBTA Service has begun.

On Board Announcements — We will coordinate a series of scripted announcements to broadcast on board each train. We will not make these announcements at the expense of the regular, necessary information distributed on board; it will be more of a friendly, informal approach to explain to passengers about the change in operation.

Meet the Managers — We will conduct special "Meet the Managers" events at North, South, and Back Bay Stations, and will serve free coffee and donuts. Managers will also spend time answering calls at the Customer Service hotline, and crafting email responses to customer inquiries, complaints and comments.

Media Coverage — Traditional (newspaper, TV and radio) and new media will be invited to "ride along" to do stories on the change in operation and its impact on passengers.

Community Initiatives

Independence Week Events — In coordination with the MBTA, we will create a patriotic theme for the week, which will culminate on the night of Friday, July 4th. This initiative could include:

- A special "Take the Train" initiative for the annual fireworks display at the Hatch Shell along the Charles River
- Partnerships with any planned Boston holiday festivities such as:
  - Topsail
  - Fleet Week
  - USS Constitution turnaround
  - Concerts and food festivals

Other community initiatives are listed in Section 7.A.9 of our Customer Service Plan.

Cleanliness: A Visible Result and a Pillar of Customer Satisfaction

The highly visible cornerstone of our commitment to excellent customer service is seen in our ambitious and rigorous program for improving cleanliness on the system. Our research cited above clearly shows that customer satisfaction hinges on cleanliness and appearance as much as on reliability and frequency.

It's simple: the aggressive, proactive cleaning program we propose will reduce complaints over cleanliness, allow customer complaints about the cleanliness of coaches to be resolved quickly, and create an on-board atmosphere where people appreciate the effort keep the coaches clean, and, ultimately, increase customer satisfaction ratings.

What Your Customers Are Saying

Our experience and strong feelings about the importance of cleanliness are backed up by the findings of our online survey of customers, which shows that ratings of "Fair" and "Poor" outstrip "Excellent" and "Very Good" in all aspects of cleanliness. This is reinforced by our non-user focus groups, in which trains were described as often being dirty.

The MBTA Cleaning Between the Lines Program

The MBTA has recognized this link between cleanliness and customer satisfaction by introducing the "Cleaning Between the Lines" program on the subway, and issuing a directive in the RFP for a much stronger cleaning program for the MBTA Service, as well. Consequently, we have designed an innovative, aggressive and highly cost-effective cleaning plan, as detailed in Section 4 Mechanical Services Plan, that will significantly improve customer satisfaction.

A Fresh Start: "A New Day on Day One"

We propose an intensive cleaning campaign to be launched at 12:00:00am on Tuesday, July 1, 2014, at the exact moment we take over the service. While it is logistically impossible to deeply clean dozens of coaches in a matter of a few overnight hours, we will "deep clean" two entire train sets--one on the South line, and one on the North—as a showcase for our new program. We will work with the MBTA to choose train sets that will maximize exposure.

This Day One cleaning program will serve as the launch of a highly visible cleaning program that will encourage customers to tell us their concerns over cleanliness of trains and stations. This feedback will be collected through:

- Feedback cards to be handed out by managers riding the trains, and by Customer Service representatives at stations
- A special email address for cleanliness concerns
- Facebook and Twitter
- The www.mbta.com's "Cleaning Between the Lines" page, which we suggest include a special commuter rail "cleanliness link" leading to our dedicated website

Seat Conditions and Repair

Our surveys and experiences using the network have raised our awareness of the poor condition of seating in many coaches. Given the age of the fleet, this is to be expected, but the condition of the seating only reinforces the sense that customers have that their comfort is a low priority and they are not receiving good value for

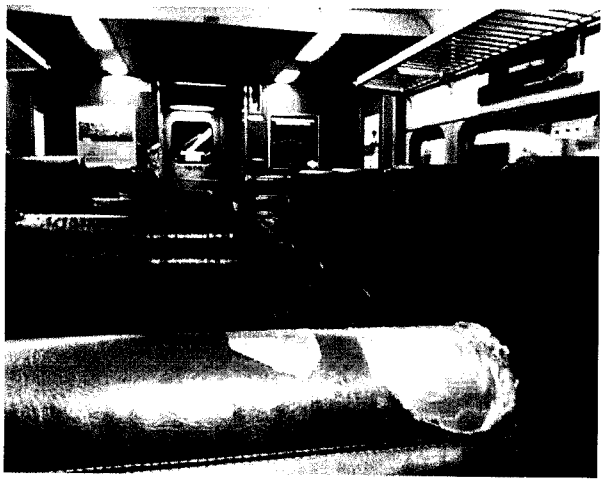


Figure 7-13: An Example of Poor Seat Condition

their money. The use of duct tape to repair ripped seats, as seen in Figure 7-13, while a temporary fix to prevent further ripping, needs to be remedied. Our Mechanical Services Plan specifies how and when we will replace the worst affected seats during the first year of our operation. This will contribute to an increased sense of value to the passenger within the first year of our tenure.

Ensuring Compliance and Improving Customer Satisfaction

We propose to ensure increases in customer satisfaction relating to train cleanliness by using a 5-level approach to compliance checks:

- Joint monthly audits with the MBTA
- Customer Service meetings with our Station and Facilities Team
- Ad-hoc audits by Customer Service and Quality personnel
- On-spot checks by conductors
- The use of mystery riders and key managers, who will travel various lines with a standard checklist and note areas that do not meet standards

These inspections and meetings will be used to identify 'hot' spots, allocate resources as needed and refine our maintenance program.

Employee Engagement

The cleanliness of trains is among the top priorities of our operation, and our employees will, be on the forefront of identifying and helping to resolve issues of cleanliness. We believe that all our employees are a source of information, and we will encourage them to communicate anything they see that is not at the stated standard. We will also constantly communicate our message of the importance of taking a proactive approach to cleanliness throughout our operation.

Community Involvement

Employees will be encouraged to come up with ideas on how they, as individuals or in groups, can participate in volunteer cleaning activities. The most prominent of these types of programs is "Boston Shines," (www.cityofboston.gov/ons/bostonshines) the city's year-round neighborhood cleanup and community service program. The program provides materials to volunteer groups to help them clean up their neighborhoods.

We will work with the MBTA to choose Boston train stations that need sprucing up; we are particularly interested in participating in the Boston Shines Citywide Cleanup, which is held during the last weekend of April. This will be an opportunity for our managers and staff to team with community groups, and improve the neighborhoods we serve.

In addition to participating in Boston Shines events, we will identify other community cleanup programs with the assistance of our Commuter Rail Riders Community, which is described below in our Customer Service Plan. This online community, open to all customers and employees who want to "do good" in their hometowns, will seek and/or create "cleaning events" for other stations.

7.A. CUSTOMER SERVICE PLAN

Approach and Management

Throughout this proposal we have consistently emphasized our belief that it is our approach to managing the operation that will deliver the greatest positive change. We believe that how we are organized for delivering customer service will be a key component in reversing the trend of declining patronage. Our Customer Service Department is the focus of **Moving Further Together** by working more closely with MBTA and building a strong relationship with our customers. Below we describe our Customer Service Department and how the roles and responsibilities identified will be drivers of change and improvement

Customer Service Management: A Structure for Success

We will reorganize the management structure of the Customer Service Department in order to promote our culture of change and performance improvement. Our approach is customer-

oriented, with focused measuring and managing on a cycle of continuous improvement. We understand the key to customer satisfaction is measuring and managing elements of paramount importance to the customer, such as on-time performance, reliability and cleanliness.

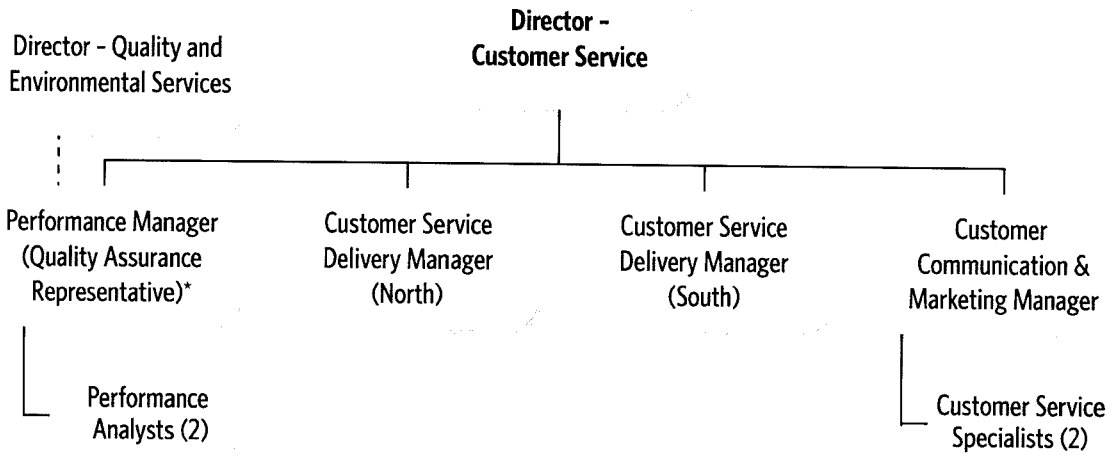
We will embed performance management overtly into Customer Service by creating the position of Performance Manager, reporting to the Director - Customer Service, and supporting this position with the addition of two Performance Analysts. These positions provide a critical link to operational functions and send a clear message to both staff and the MBTA that operational performance is the single biggest driver of customer satisfaction.

Our new structure eliminates the positions of Chief Customer Service Officer, Senior Customer Service Manager and Senior Customer Service Specialist. This allows us to eliminate a layer of management between the Director - Customer Service and the Customer Service Delivery Managers responsible for North and South Services. These positions need to be directly accountable to the Director - Customer Service to communicate daily customer service-related issues, as well as to provide feedback on improvement initiatives. The Customer Service Delivery Managers will also work with the Customer Communications team to ensure prompt and reliable communications via social media and other channels.

The new Customer Service organization will be led by our Director - Customer Service, who will report directly to the General Manager. Our proposed organization chart is shown in Figure 7-14, followed by descriptions of each position.

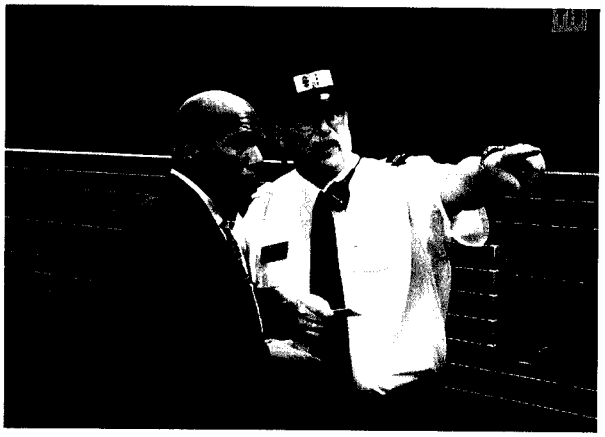
Director - Customer Service

The Director - Customer Service will be our champion of customer needs at all levels of the organization. Our candidate will oversee all customer service and public information efforts, including investigating complaints and responding to customer comments. The Director - Customer Service will manage the relationship between the MBTA and us in terms of innovation in marketing, customer information management and performance monitoring.


Director - Quality and Environmental Services
Director - Customer Service
Performance Manager (Quality Assurance Representative)*
Customer Service Delivery Manager (North)
Customer Service Delivery Manager (South)
Customer Communication & Marketing Manager
Performance Analysts (2)
Customer Service Specialists (2)

* Shared position (Customer Service & Transportation departments)

Figure 7-14: Customer Service Team Organization



Performance Manager

As the owner of the Joint Performance Improvement Program (JPIP), the newly created position of Performance Manager will have primary responsibility for measuring and managing our customer-focused performance improvement program. Accordingly, this position will have a direct line to the Quality Manager, as well as report to the Director - Customer Service. In addition, the Performance Manager will be a shared position between Customer Service and Transportation, and will also interface with Mechanical Services. The Performance Manager will serve as Quality Assurance Representative for both the Customer Service and Transportation departments, and will implement the Quality Assurance Plan for both of those departments..

Performance Analysts (2)

The Performance Analysts, reporting to the Performance Manager and our Quality Manager, will collect and analyze performance-related data, ensuring that all stakeholders receive relevant reports in a timely and efficient manner. We will recruit the two additional Performance Analyst to begin on July 1, 2014. During Mobilization, an Interim Performance Specialist will design and begin to implement the Performance Improvement framework and specification, including the monitoring and reporting framework. He will be supported by an Interim Operations Specialist, who will work on improving the timetable and removing operational conflicts.

Customer Service Delivery Managers (2)

The front line of our customer service will be the Customer Service Delivery Managers, who will be located in the North and South Stations and will manage our Customer Service Representatives. The Customer Service Delivery Managers will have particular responsibility for ensuring the staffing and quality of the Passenger Train Information System (PTIS), including feeding delay and disruption information to the Communication team to allow real-time updates to passengers. The Customer Service Delivery Managers will be responsible for the continuous improvement of staff, and they will identify opportunities for staff to improve their skills and undertake management training. Further details are contained in the Section 8 Management Plan.

The Customer Service Delivery Managers will manage our 35 full-time Customer Service Representatives and 3 cashiers. . They will set the rosters for staffing the Customer Service Offices (North and South Stations); Information Booths at North, South and Back Bay Stations; ticket offices at North, South and Back Stations; and the PTIS desks in each dispatcher's office as described in the RFP. While the hours of staffing these services have increased, we anticipate keeping the staffing at the present level, using overtime to cover them. This management team reconfiguration is cost-neutral and provides flexibility to meet the requirements of the RFP.

Customer Communication and Marketing Manager

The Customer Communications and Marketing Manager will have the primary responsibility for the complete range of communication tools at our disposal, including our dedicated website, Twitter and Facebook. The manager will also be responsible for working with MBTA to ensure the quality and content of information on the main MBTA website. In addition, the Customer Communication and Marketing Manager will have responsibility for all aspects of customer satisfaction monitoring,

including our biannual Customer Satisfaction Survey and mystery rider surveys.

Customer Service Specialists (2)

The Customer Service Specialists are on the front line of customer feedback, managing issues such as complaints handling, customer feedback management, and lost and found processes. Under our new structure, we have placed greater emphasis on communication both in real time and through increased visibility through social media and other channels. Our Specialists will support this effort, not only through only handling complaints and feedback, and answering the phone professionally and promptly, but also by ensuring our various communication initiatives are managed professionally

Customer Service Standards

Our goal is to provide high-quality customer service to all passengers, with a commitment to meeting and exceeding safety, customer care and revenue standards.

As part of our culture of change, we will establish standards for all of our employees and will reinforce these standards through training and specific written instructions. We will provide regular training to our employees on these instructions and will monitor and audit them for compliance. The training and instructions will cover but not be limited to:

- Employee conduct
- Employee responsibility
- Appearance, dress code and grooming

Details of our expectations with respect to these standards are included in Section 8 Management Plan.

A Commitment from our Leadership Team

Our local management team will be hands-on, seeking out regular interactions with customers and employees, and our Keolis Group senior management and directors will be visible partners in our operation of the service. Our Director - Customer Service will take part in webinars, online forums and annual meetings with our customer service leaders from around the world to share best practices that will be applied to the MBTA Service.

Employee Development and Training

In addition to attracting highly qualified people through our recruitment process, we need to ensure that we retain them. Part of our strategy to achieve this is our Customer Service Employee Development and Training Program.

As detailed in Section 12 Mobilization Plan, we will provide new hire orientation for all our employees serving in the MBTA Service. We plan to administer two orientation modules of approximately four hours each.

The first module will focus on who we are, what we expect from our employees and our corporate culture. The second module will discuss in detail how each employee will contribute to the success of our relationship with customers and the MBTA.

Commitment to Service by Every Employee

As part of individual performance reviews, each customer-facing employee, including train crews, will develop her/his own customer service plan, focusing on areas for development such as knowledge of MBTA services, safety procedures or personal communication skills. Management will support employee efforts to meet those standards. This is a key part of **Moving Further Together** as we instill a culture of constantly improving customer service throughout the organization.

The types of training courses we aim to deliver are included in Section 8 Management Plan

Details on the training of, and customer service responsibilities for, all train crews are included in Section 6 Transportation Services.

A summary of the type of training is shown in Figure 7-15.

MBTA Requirement	KCS Training Course	Participants	Course Content and Learning Objectives
ADA training	ADA training	Transportation and Customer Service staff	Serving passengers with disabilities: Understanding the needs of passengers with disabilities Handling passengers with disabilities Wheelchair lift and ramp use
Customer Service Representative qualification	Think Like a Passenger	Customer Service Transportation - Conductors, Assistant Conductors, Engineers, Customer Service Representatives	Defining types of customers Good customer service practices Creating a first impression Dealing with delays Importance of customers Dealing with difficult passengers
Communication	Effective communication	Transportation and Customer Service staff	Identifying strengths and weaknesses as a communicator Appropriate body language Effective listening habits Inhibitors to effective communication
	Anger management and conflict resolution	Transportation and Customer Service staff	Identify personal triggers How to shift automatic response traps Staying calm Diffusing emotionally charged situations

Figure 7-15: Potential Staff Training Modules

Details on the training of, and customer service responsibilities for, all train crews are included in Section 6 Transportation Services Plan

Moving Further Together on Training

As described in Section 8 Management Plan, we are committed to partnering with local community colleges to develop and host our training programs. We have already executed letters of intent with Bunker Hill College and Roxbury Community College, and the leadership of the entire Massachusetts Community College system has expressed interest in extending the relationship to other campuses, most of which are in the Service area. We see this as important outreach, not just to the academic community, but to our employees and potential employees.

And we want the *entire* MBTA organization to join us.

Our vision for future MBTA collaboration and **Moving Further Together** is the provision of joint training programs across all MBTA service groups: bus, subway, ferry and commuter rail. While the technical skills needed to operate the various services may be different, the principles of excellent customer service are universal.

We believe customer service is an area where we can be the innovators in professional development for public transit employees in the MBTA area. As a critical first step, we are committed, upon Notice to Proceed, to setting aside 10% of all seats in any training session for management and/or staff of other MBTA services. We will work with the MBTA to determine who should participate in these sessions, and to set up a training schedule to guarantee maximum participation.

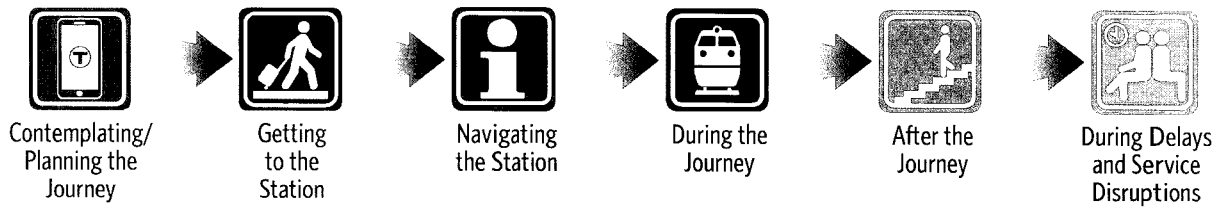
Oke Service at Keolis Lyon

We have developed a successful customer service training program in Lyon, France called "Oke Service." A detailed case study on how the program works and what it has achieved is provided in Appendix 7-1 of this Customer Service Plan.

7.A.1. Providing Prompt and Accurate Public Information

From our global experience and feedback in our surveys in Boston, we know that keeping customers well informed is extremely important in ensuring satisfaction and patronage. Delivering timely, relevant and accurate information is therefore critical to MBTA Service users and will be a hallmark of our success.

We will pursue a series of related initiatives designed to improve the timeliness, accuracy, and usefulness of information to MBTA customers from one end of their journey to the other—from before they board a train to after they disembark at their destination. Our program is presented for each of the six stages of a passenger's journey experience.



Contemplating/Planning the Journey

The customer experience begins with the customer service website. This website will give customers quick and easy access to the specific train information they seek, and will help build loyalty among our customers, many of whom may not use other MBTA services on their regular commutes.

In partnership with the MBTA, we will develop a complementary website dedicated to the MBTA Service. This new site will augment relevant information from **www.mbta.com**, which will remain the first stop for planning a journey, understanding fares, etc. The website will be easy to use, up to date, and multi-lingual and it will emphasize our role as an operator in partnership with MBTA. We will include a direct link to **www.mbta.com**, and we suggest that the MBTA also provide a direct link from its site to ours.

Getting to the Station

Trailblazers

The system of highway signs known as "Trailblazers" on major thoroughfares in Massachusetts and Rhode Island alerting drivers that a MBTA Service rail station is located off the next exit, is employed inconsistently. A small irritation such as the failure to guide a customer from the highway to the station sends a message that the commuter is on his or her own in accessing the service. This is at odds with our commitment to **Think Like a Passenger**.

Consequently, we will inventory signage leading to stations outside of Boston, and develop recommendations for adding and improving signage in order to provide easier access to stations. In addition, we will evaluate expanding the use of mobile electronic signs on highways to provide train departure information (similar to signage on Interstate 93 approaching the Anderson Regional Transit Center in Woburn).

Parking at the Stations

The "honor box" parking system, in place at many train stations throughout the system, is not customer-friendly, requiring customers to stuff exact change into a lockbox positioned out in the elements. At the same time, some stations offer discounted monthly parking permits, and the MBTA's new Parkmobile system, allowing customers to use their mobile devices to pay for their parking space, is now available at some 70 stations. However, awareness and use of these more convenient alternatives appears to be lagging, and we sometimes found it difficult to locate information on these programs online or at the stations.

We will work with the MBTA to increase availability of information on these alternative payment programs and promote their use. We will promote the Parkmobile system through our own website and at sign-up events we will host at key stations outside of Boston. We will also design programs to provide incentives (coffee vouchers, three days of free parking, etc.) for new participants. At stations where monthly parking permits are available, we will also conduct informational campaigns to increase awareness of permit availability and benefits.

Passengers Needing Special Assistance and Passengers with Disabilities

We will work with the MBTA to continue to maintain the current high level of information available on accessibility for the MBTA Service (e.g., new and upgraded facilities as part of the "Key Station Plan," locations of stations with full or mini high-level platforms, availability of "The Ride" program for people unable to use fixed route services).

Navigating the Station

Accurate, frequent and easily accessible information on train status greatly enhances the customer's experience of the Service. At stations outside of Boston, passengers rely primarily on the Passenger Train Information System (PTIS), which provides updated information on LED signs. To ensure the timeliness and accuracy of this information, we will locate Customer Service Representatives near Chief Dispatchers in North and South Stations and assign responsibility for the PTIS at various times in their roster. Customer Service Representatives will be stationed at both the North and South PTIS desks between the hours of 5:00am and 10:00pm, seven days a week. We will also check rolling LED operation at all stations at least once a week, as part of our expanded cleaning regime for stations.

In addition, we will work with the MBTA to explore options for improving use of Rail Radio to provide real-time train arrival information via low-wattage AM radio frequencies at stations with more than 50 parking spaces.

At Boston stations, we will work on reviewing the processes for posting train departure information at major terminal stations (South Station, North Station, Back Bay Station, Amtrak's Route 128 Station), and ensure that track assignments are updated quickly and accurately. We will also work to bring information availability at North Station and Back Bay Station up to the standards currently being set at South Station.

At North Station, we will develop recommendations to improve clarity and audibility of announcements, given the facility's acoustical challenges. At Back Bay, we will develop recommendations for ways to include time of arrival and departure on the information boards, which they currently are lacking. In addition, we will make improvements to improve visibility and accessibility of the information booths at both North Station and Back Bay Station.

At all stations, we will comply with all MBTA requirements in producing, posting and distributing public informational materials provided by the MBTA. These materials will be printed on recyclable paper and will be weather-resistant.

During the Journey

Our field researchers found inconsistencies in on-board announcements, including no announcements being made, incorrect station announcements, two automated announcements playing at the same time and poor audio on several trains that made both automated and vocal announcements impossible to understand. Given the wide range of duties demanded of them, conductors often were unable to provide vocal announcements when the automated announcements were missing or inadequate.

To ensure the consistency and usefulness of on-board announcements, we will review the quality of the PA systems on each train and ensure that passengers receive timely, accurate, and clear information.

We will provide additional training to conductors on effective ways to communicate with customers, including, how to provide excellent customer service (attitudes, speaking to customers, person-to-person relationships) and the requirements for providing accurate, timely information (fares, service updates, disruptions, delays, etc.). We will also include announcement procedures in train crews' supplemental instructions.

Finally, we will work with the MBTA to determine the effectiveness of the "Conductor Companions" pilot program, in terms of getting up-to-the-minute information to the conductors and passengers, and we will investigate alternative innovations (for example, better use of mobile technologies) to equip conductors and assistant conductors with real-time information.

After the Journey

Direct Contact with Customers

For customers arriving at any station, we will ensure easy egress is provided to create a positive experience in the system. We will work with the MBTA to provide:

- Good, clear directional signage that facilitates easy exit and efficient interchange with other modes of transportation
- Visual and audio information for arriving passengers
- All information configured toward the needs of the mobility, vision and hearing impaired
- Competent, courteous and efficient staff at North, South and Back Bay stations to provide information

Throughout our tenure as the operator of the MBTA Service, we will monitor and seek feedback on the effectiveness of passenger signage within the stations. We will work in partnership with the MBTA to improve messaging in terms of both passenger information and public safety.

A Future Partnership Initiative: DEFI Analytical Tool

Another area in which we believe can significantly improve the experience for customers is improving connectivity within stations, using a sophisticated diagnostic tool to gauge accessibility of other modes at stations. The "Intermodal Efficiency Diagnostic" (known by the French acronym "DEFI") is currently in use by our majority stockholder, SNCF, to evaluate the performance of all components of transportation at any specific location:

- Station signage and other forms of information
- Parking
- Coordination of multiple mode of transportation
- Accessibility

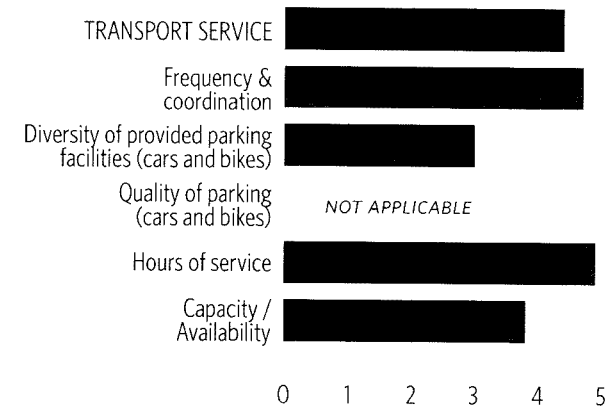

TRANSPORT SERVICE
Frequency & coordination
Diversity of provided parking facilities (cars and bikes)
Quality of parking (cars and bikes)
NOT APPLICABLE
Hours of service
Capacity / Availability
0 1 2 3 4 5

Figure 7-16: DEFI Results for Porter Square

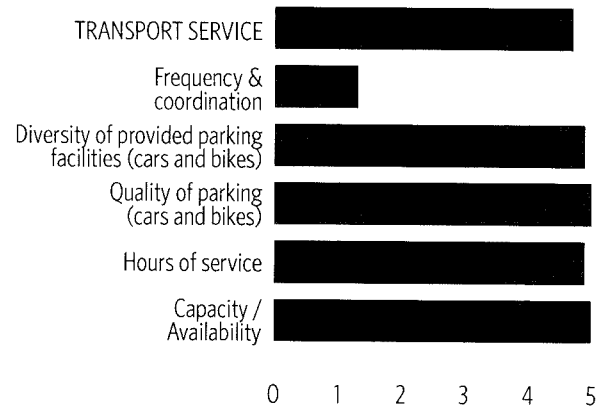

TRANSPORT SERVICE
Frequency & coordination
Diversity of provided parking facilities (cars and bikes)
Quality of parking (cars and bikes)
Hours of service
Capacity / Availability
0 1 2 3 4 5

Figure 7-17: DEFI Results for Anderson RTC

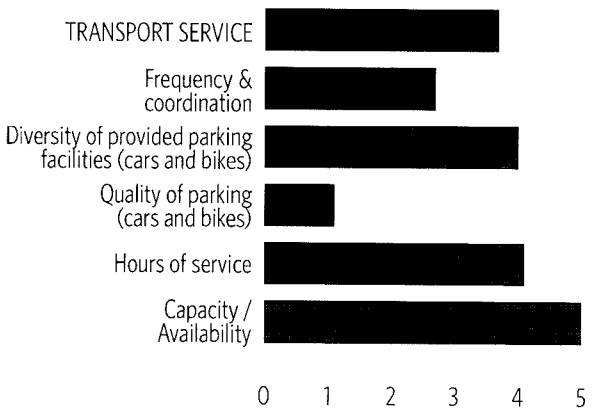

TRANSPORT SERVICE
Frequency & coordination
Diversity of provided parking facilities (cars and bikes)
Quality of parking (cars and bikes)
Hours of service
Capacity / Availability
0 1 2 3 4 5

Figure 7-18: DEFI Results Lowell

This structured approach will allow us to develop concrete solutions for removing barriers to travel arising from a lack of interconnectivity.

In early June, we piloted the use of the Intermodal Efficiency Diagnostic to assess its effectiveness as a possible tool for the MBTA Service. We looked at three stations:

- Porter Square
- Anderson Regional Transit Center
- Lowell

The key findings from each of these stations are shown in Figures 7-16 through 7-18. Each category is giving a score on a scale of 1 to 5, with 5 being the highest. The score for the top category, "Transport Service," assesses the overall quality of connections with other modes.

Lessons Learned from DEFI Pilot Program

The DEFI pilot highlighted different areas for improvement at each of the stations surveyed:

- **Porter Square:** The overall quality of service is good (4.4 out of 5), but there are opportunities to increase parking for cars and bicycles (although we understand this part of Cambridge does not have parking availability). We could also look for ways to improve the coordination between the MBTA Service arrivals and departures, and those for the Red Line and local bus routes.
- **Anderson RTC:** This station scores high in every category except for "Frequency and Coordination." This is due to the fact the field study was done in mid-morning, after the AM peak. While the coordination between trains and the Logan Express seems adequate, we observed that no regional bus service is available at Anderson. . Working in partnership with the MBTA and appropriate Regional Transportation Associations, we would look at different options for connecting with bus service in order to increase the attractiveness of the MBTA Service.
- **Lowell:** This station's overall score is the lowest among the three stations we visited. The DEFI tool helps us zero in on the more important

issues at each station — for example, in the case of Lowell, the quality of parking for cars and bicycles.

Our DEFI tool provides flexibility, and field surveys can be done at multiple times on multiple days to best capture the true level of multimodal access. We believe that use of a similar tool can provide additional intelligence to MBTA to help prioritize investments to reduce barriers to travel. .

Using DEFI as part of South Station Expansion Project

A modified version of DEFI could be used to assist MBTA in specifying their requirements for the proposed South Station High-Speed Intercity Passenger Rail Expansion and Layover Facility project (see Figure 7-19).

As MassDOT has outlined, this expansion will increase statewide transportation access, environmental sustainability and improved personal mobility among customers. Our DEFI diagnostic tool could provide possible guidance in defining MBTA's needs for a new South Station. Our relationship with the developer, HNTB—and in particular with HNTB's Anthony Gouveia, former Chief Engineer of the MBTA—also gives us a unique perspective on the project. HNTB has worked with us as a subcontractor on engineering services, and they assisted us with our Pre-Proposal Property Condition Assessment. We have benefited and will continue to benefit from our working relationship.

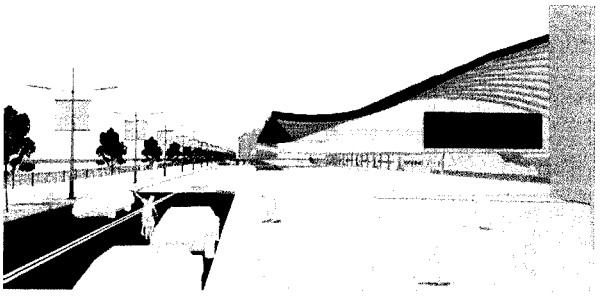


Figure 7-19: Artist Impression of South Station Expansion

During Delays and Service Disruptions

The key customer service component of any disruption, whether planned or unplanned, is keeping customers constantly informed of the situation, what is being done to rectify it, and how soon the disruption is expected to end. The sections below outline our approach to information distribution during planned and unplanned disruptions.

Improved Information During Planned Disruptions

Our customer service function will work directly with our Transportation and Engineering functions to stay on top of planned service interruptions (such as for infrastructure repairs). We will then provide information to passengers on planned disruptions and on alternative transport options, if appropriate. We will inform customers of the start date and end date of the disruption, and will provide updates during the disruption, using a variety of information channels:

- Leaflets and posters (as required)
- Updates on our customer service website
- Social networks
- Email/SMS text, T-Alert system
- Verbal announcements on trains and at North, South, and Back Bay Stations (as appropriate)
- Messages through the Passenger Train Information System (PTIS)
- Development of MBTA-approved apps
- Local media and bloggers

Through our customer satisfaction surveys and mystery riders, we will continuously seek feedback on how we can improve the provision of information and services during planned delays.

Improved Information During Unplanned Disruptions

The key to successfully managing unplanned disruptions is to have a formal and clear process. For the MBTA Commuter Rail Service, we will

adapt processes we have successfully established in our other operations for managing unplanned disruptions. Figure 7-20 shows an example how these processes are managed in our operations in Lille and Lyon, France.

We will develop a clear process for communication of passenger information during unplanned disruptions. This process will provide:

- Passenger-focused decision making and coordination between the Customer Service Team, particularly those manning the PTIS sign desks and Chief Dispatchers
- Rapid response by Transportation, Mechanical Services and the Customer Service Team to identify severity and response by staff (including "all hands on deck" decisions, etc.)
- Prioritization of pertinent information to be communicated to both frontline staff and passengers in a timely and visible manner
- Website, Facebook and Twitter updates to disseminate key information
- Real-time email and text messages to warn passengers of delays so they can adapt their travel plans

We will also provide training to our customer service staff to ensure they will effectively:

- Monitor and react to all systems and launch into "all hands on deck" mode when appropriate

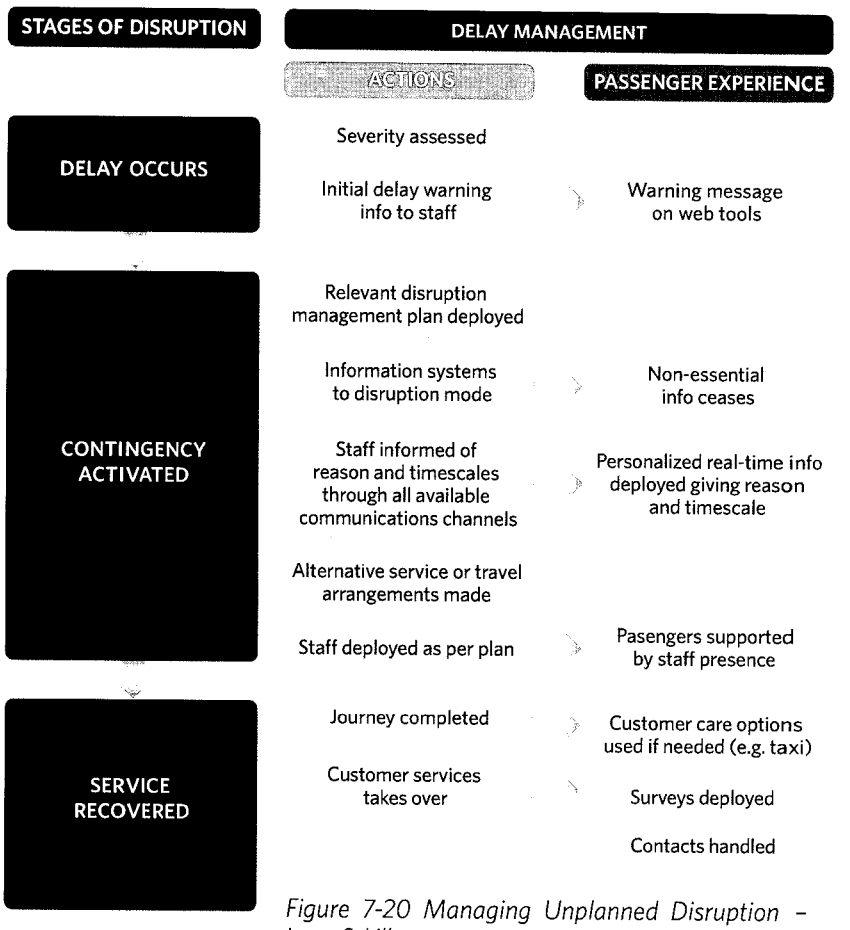

STAGES OF DISRUPTION
DELAY MANAGEMENT
ACTIONS
PASSENGER EXPERIENCE
DELAY OCCURS
Severity assessed
Initial delay warning info to staff
Warning message on web tools
CONTINGENCY ACTIVATED
Relevant disruption management plan deployed
Information systems to disruption mode
Non-essential info ceases
Staff informed of reason and timescales through all available communications channels
Personalized real-time info deployed giving reason and timescale
Alternative service or travel arrangements made
Staff deployed as per plan
Pasengers supported by staff presence
SERVICE RECOVERED
Journey completed
Customer care options used if needed (e.g. taxi)
Customer services takes over
Surveys deployed
Contacts handled

Figure 7-20 Managing Unplanned Disruption – Lyon & Lille

- Transmit information to passengers at stations and on trains calmly and clearly in the event of delays, breakdowns or emergencies
- Exchange and transmit traffic information with the MBTA in connection with operational requirements

During unplanned disruptions, we will rely on audio announcements and electronic messages boards at the stations to provide:

- Information about the type of incident
- Information about expected delays, at stations and on board
- Special information for passengers on stopped trains (emergency, evacuation information, etc.)

We have developed guidelines for conductors and assistant conductors for delivering information to passengers during unplanned disruptions. These guidelines ensure that messaging is communicated safely, clearly, and accurately. Train crew will also receive enhanced training for dealing with passengers during severe disruptions.

Alternate Transportation

When alternative transportation is required during any planned or unplanned disruption, Customer Service Representatives will provide information through all networks to inform customers and staff of the replacement transportation. We will clearly define the scenarios under which we will deploy alternate transport and how we will work with the MBTA to minimize delays and customer inconvenience. A detailed Alternate Transportation Protocols Plan will be provided to the MBTA 60 days after Notice to Proceed. These protocols will include:

- Maintaining an up-to-date roster of private carriers, complete with contact names, emergency phone numbers and operating statistics. This roster will be provided to the MBTA by the commencement date and will be updated quarterly thereafter
- Notifying the MBTA immediately of the need for alternate transportation
- Notifying customers of the use of alternate transportation through station, on board, online, text and email announcements
- Providing personnel at affected areas to assist customers and coordinate use of alternate transportation

Customer and Public Safety and Security Information

Our commitment to safety is summed up by our Chairman, Jean-Pierre Farandou:

"Safety is always our first priority and takes precedence over all other considerations. It is the responsibility of every employee, irrespective of position."

This renewed focus will result in greater awareness among the riding public, and send a clear message that safety and security are top priority.

Safety Information

As detailed in Section 2 Safety Plan, we will develop and launch a broad-based safety communications campaign that includes:

- Building a ***brand*** for the safety development program, which will be used for all safety-related communications
- Providing ***posters on trains and at stations*** displaying key commuter rail "golden rules" relating to passenger safety.
- Scheduling r***egular announcements on trains and at stations*** providing safety information

Security and Emergency Information

As detailed in the Section 3 Security Plan, we will at all times cooperate and coordinate with the MBTA Police in distributing information regarding MBTA-approved security programs. We will provide visible and clear information to educate customers on security precautions and to enable them to effectively respond in the event of an emergency. This includes our posting of emergency instructions, as well as using other means of to provide security awareness information, which may include:

- On-board announcements by conductors and assistant conductors
- Ticket stock
- Timetables
- Station signs or video monitors
- Public Service Announcements
- Seat drops
- Operator website

Increasing Awareness of Existing Public Safety Campaigns

The MBTA is participating in several important safety and security campaigns throughout its system:

- **Operation Lifesaver**, whose goal is to end collisions, injuries and deaths at level crossings and along railroad tracks
- **The Preventing Sexual Assault** campaign
- The **"See Something, Say Something"** campaign

We will work with the MBTA to increase awareness of these important initiatives on trains and at the stations. We will develop a wide-ranging information program that can include:

- Posters on trains, at stations and in community locations
- Posting of informational videos on www.mbta.com and our customer website.
- Distribution of latest Public Service Announcements to media outlets in Boston, Providence and other communities
- Hosting events throughout the service network
- Using Facebook, Twitter, and other social media channels
- Working with the MBTA to create effective messaging for audio announcements on trains and at stations, and through the Passenger Train Information System.

Unlike the situation with the current operator, our Director - Customer Service will volunteer to serve on the Massachusetts Operation Lifesaver Board of Directors.

App Development

We applaud the MBTA's open data approach to apps for real-time information, and the recent launch of real-time alerts and schedule data interface for third-party providers. We await the impending release of commuter rail data on the MBTA real-time Developer Portal as described on www.mbta.com.

Partnering with the MBTA and Local App Developers

Our majority shareholder, SNCF, is experienced at application development for real-time information and raising the profile of its transport services. Mobile applications play a key role in providing information to customers. We will leverage our experience and our technical and marketing skills in partnering with the MBTA to develop and execute an effective mobile strategy.

As described in Section 11 Information Technology Plan, we will analyze the current app offerings for the MBTA Service and propose new ideas to improve the customer experience.

As an example, SNCF has developed an application for our Transilien commuter train line in Paris. (See Figure 7-21.)

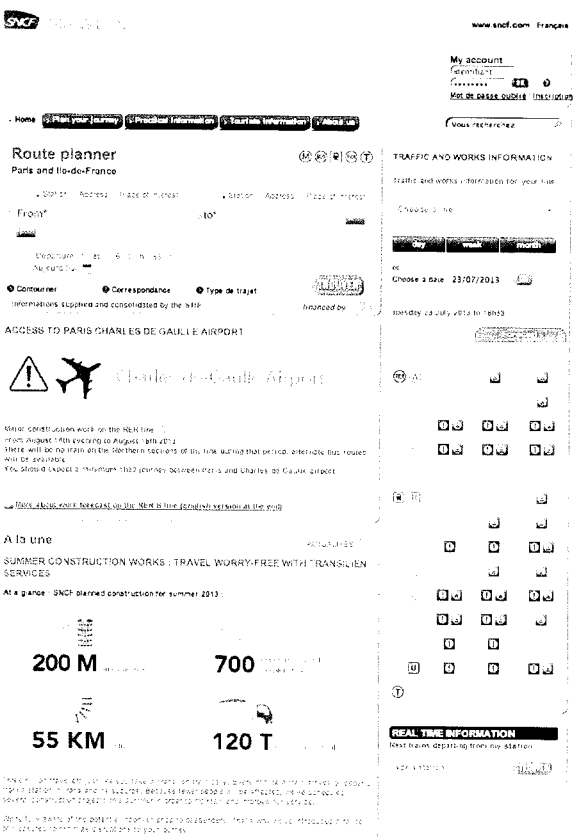


Figure 7-21: Screenshot of Transilien App User Interface

The Transilien App, available free of charge, provides real-time information on train arrivals and departures, delays and planned and unplanned disruptions. It also provides a journey planner and links to Facebook and Twitter. Real-time information is available to our customers without smart phones through our mobile website.

We will work with the MBTA to develop a free app similar to the Transilien application that will be more robust and available to more users than the "MBCR Train Tracker" in use by the current operator, and available only to users of Windows 7.5 and Windows 8. We will also work with the MBTA to select a local developer to create the application.

Developing Community Outreach Through Open Data

The development of our own application for the MBTA Service will in no way compromise the MBTA's open data policy, which we agree is an effective way to reach out to potential community partners. Boston's stature as a hotbed of high tech innovation presents the opportunity for the MBTA Service to become part of that innovation, by being in the forefront of celebrating and reaching out to local entrepreneurs who could become our partners and help spread the word the Service.

To that end, we propose to create a unique connection to this community by sponsoring contests for application development. We believe an outreach program of this type will stimulate awareness of the benefits of the MBTA Service and will directly benefit customers.

7.A.2. Lost and Found Services

We will develop a set of standard, passenger-centric procedures for Lost and Found Services which are more transparent for both customers and the MBTA than at present. We will submit the plan to the MBTA for approval within 60 days of Notice to Proceed.

The central pillar of our lost and found process will be the use of the Issue Tracking Portal to log and track items. We will provide staff with additional training, as needed, on procedures such as safely checking trains for items left behind, and we will give staff clear instructions and procedures for properly handling lost items, in accordance with the Lost Articles provision of MBTA General Rules.

The Issue Tracking Portal will be maintained by our information technology function and deployed across multiple functions to provide a centralized repository for tracking resolution of a wide range of issues. With respect to Lost and Found, we propose that identifying information for each item will be entered within the portal. Each item will be assigned a tracking number, allowing staff (and the MBTA) to easily look up and track items when contacted by customers. This system will also allow us to determine how long an item has been held and at what point the item should be recycled, sold or given away.

In addition to our robust tracking process, we will also discuss with both Amtrak and MBTA how to improve public information relating to reporting lost items. This will include improving signage within North, South and Back Bay Stations.

In deploying similar procedures as the operator of the Virginia Railway Express, we have been able to increase the amount of lost property returned to customers, and perhaps more importantly, show that we are a caring organization that values the people it serves on a daily basis.

7.A.3. Planning for, and Handling of, Service Related to Special Events

As our research shows, most people consider the MBTA Service to be focused on work-related travel. To help overcome this perception, we will work to reinvigorate the provision of services for special events.

Our deep and varied experience in special event handling on other systems will guide our approach for the MBTA Service. We will focus on ensuring that our customer base is well informed and experiences the best care possible on these services. An essential ingredient in delivering this is working in partnership with the MBTA.

To prepare for special event services, we will work with stakeholders to assess the type of event and the numbers likely to attend. For each event (whether one-off or regular) we will develop procedures to accommodate passengers and maximize the positive impact that good service provision has on customers.

Customer service-oriented actions we would take as appropriate would include those shown in Figure 7-22.

Innovation in Creating Destination Journeys

We see new opportunities by **Moving Further Together** in providing special services. We are experienced in creating new campaigns to promote outdoor and cultural activities near train stations. At SNCF, we have increased ridership on Saturdays and Sundays by more than 75% over the past decade by promoting journeys to areas already being served by our train lines in France. SNCF identified destinations in proximity to its stations, and listed them on trains and in a special booklet handed out to all passengers on a particular weekday. Commuter rail is the perfect way to enjoy a weekend excursion without the hassles of highway traffic.

We created 5,000 copies of leaflets for each of four lines to promote points of interest within walking distance of train stations, to inform customers of the many interesting locations and events held that are accessible by train. (See Figure 7-23.)

Figure 7-23: Example brochure for walking routes from stations in France

PROMOTION OF THE EVENT
e.g. 4th of July, football games, etc.

- Regular recorded and "live" announcements on trains and in stations
- PTIS Displays
- Social media outreach (MBTA website, our own website, twitter, facebook)

CROWD MANAGEMENT
e.g. peak demand & safety management

- Signage
- Supervision (sourced from managers, union employees, volunteers, etc.)
- Provision of barricades
- Planning through joint briefings and post event reviews

Figure 7-22: Pillars of Special Service Planning

Some of the possible "destinations" for special weekend excursions on the MBTA Service include:

- Plymouth Plantation
- Salem
- Rockport
- Gloucester
- Old North Bridge in Concord
- Historic Providence
- Antiques excursion to Wickford

Considering the fact that many people see MBTA Service as strictly for commuters, these weekend excursions create an opportunity to get Monday-Friday customers to use the Service on weekends. This will attract an entirely new customer base looking for a relaxing way to reach the many attractions near MBTA Service stations in Massachusetts and Rhode Island.

We will develop, in partnership with the MBTA, an annual Action Plan for Special Events to create a calendar from which we will plan and coordinate all special event trains. We anticipate that with a minimal marketing budget, we will be able to expand customers' perceptions of the MBTA Service beyond merely getting to and from work.

7.A.4. Responding Promptly and Effectively to Customer Complaints and Suggestions for Service Improvements

Complaint Investigation and Resolution

A lack of information and poor communication are among the most common causes of customer complaints and dissatisfaction. In Figure 7-24, we show how poor provision of passenger information and overall poor customer service governance leads to a negative cycle of customer satisfaction. To break this negative cycle, we will employ the rigorous complaint resolution process we have found successful in other operations, enabled by our leading-edge technology.

We will commit to investigating, following through and resolving complaints and providing high-quality responses to the customer within five business days of receipt of a complaint, using our cloud-based Issue Tracking Portal to manage the complaint process. We plan to close customer complaints in the first written reply.

Measuring, Managing, Improving

The MBTA currently solicits "Inquiries, Comments, or Concerns" on the Customer Support page of www.mbta.com, and includes a link to "Comments and Concerns" regarding commuter rail. That link takes the customer to the current operator's website, which includes a form that enables customers to "directly submit a concern to a customer service representative for immediate investigation and resolution."

Other channels through which passengers can issue complaints and concerns include:

- In person through conductors, assistant conductors or Information Booth personnel at South, North and Back Bay Stations
- Customer Service phone number
- Letter to MBTA headquarters
- Twitter
  - For all MBTA passengers
    - @mbtaGM
    - @mbta_alerts
  - For commuter rail passengers
    - @MBCR_info
- Meet the Managers: sessions held periodically at North, South, and Back Bay Stations

We will use our Issue Tracking Portal, as detailed in Section 11 Information Technology Plan, to capture initial complaints from all these channels. The Issue Tracking Portal can then be used to inform the appropriate department of the issue, assign responsibility for resolving the issue, and track progress through resolution. The Issue Tracking Portal will provide a daily "countdown" to the staff member assigned to an issue and ensure that all complaints are resolved within five business days, or that the customer issuing the complaint is contacted within five days if the issue cannot be resolved in that time.

The Issue Tracking Portal will also be used to provide information on the number and nature of communications from customers. The data

available from the Issue Tracking Portal will allow us to refine our action plans and prioritize the actions that will have the maximum effect for customers.

Managing Complaints: The Process

The Director - Customer Service will be responsible for ensuring that all customer complaints and suggestions are responded to in an accurate, timely and professional fashion. The process is described in more detail below:

- All complaints and comments are recorded and entered into the Issue Tracking Portal, with the following information: customer's name and contact information, the date and time of the complaint, the details of the complaint or question, and the status.
- The Customer Service Department informs the customer that we have received their complaint or question and that we are in the process of formulating a response.
- Once an issue is logged, the Director - Customer Service will determine which department is best suited to respond to the complaint or question.
- Customer Service initiates an internal memo in the system that sends a notification to the contact person in the appropriate department. Complaints are then managed through a single contact person in each department to ensure the complaints are handled effectively. The notification informs them that there is a complaint or question which requires a response in the required five days.
- The department contact will receive daily alerts on outstanding complaints and questions as well as a "countdown" of how much time is remaining to respond.
- The department contact sends a brief response to the Director - Customer Service through the system.
- This brief response is used by Customer Service as a basis for its response to the customer. It is the Director - Customer Service's responsibility to ensure the responses are professional, yet written in clear language and easy to understand.
- If the MBTA is dissatisfied with our initial response, the concern may be raised to our General Manager for a review and follow-up response in writing.
- If it is anticipated that the five-day deadline will not be met, then we will contact the customer to let them know there is a delay in the response, but that we are still working on it.
- If a customer complaint or question results in our reviewing and changing current processes or operations, we will let the customer know that these changes have been made and thank them for bringing the complaint or question to our attention.

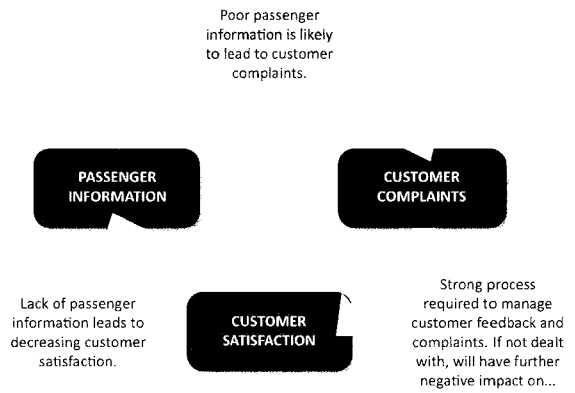

Poor passenger information is likely to lead to customer complaints.
PASSENGER INFORMATION
CUSTOMER COMPLAINTS
Lack of passenger information leads to decreasing customer satisfaction.
CUSTOMER SATISFACTION
Strong process required to manage customer feedback and complaints. If not dealt with, will have further negative impact on...

Figure 7-24: Relationship Between Complaints and Customer Satisfaction

If a complaint is of an extremely serious nature, or in other appropriate circumstances, we will meet the customer in person (with the agreement of MBTA). We find that this allows us to address the issue with maximum efficiency. The General Manager or designate will meet the customer with the relevant department head. We will communicate in detail what our actions will be with timelines, and promise to keep the customer informed.

Furthermore, we will notify the MBTA and the MBTA Department of System-Wide Accessibility within a maximum of 12 hours after our receipt of any customer comment or complaint related to the American with Disabilities Act. We will also

notify the MBTA and the Office of Diversity and Civil Rights within a maximum of 12 hours after receipt of a customer comment or complaint related to civil rights or DBEs.

Measuring our Success and Tailoring Our Program

Using a detailed set of sub-categories under top-level category, we will be able to break down information on complaints to a very granular level and report on them in detail.

We will also be able to audit the quality of responses through quarterly audits, performed on a representative sample of responses (emails, letters and telephone calls). Quality will be evaluated based on such measures as grammar and spelling; style and tone of the communication; and percentage of come-backs. Accuracy of responses will be measured through these quarterly audits, as well. Accuracy will be evaluated using metrics such as correct codification, relevancy and topicality of responses, and how the investigation was carried out. The results of these audits will inform the development of on-going training for our employees.

In addition, the person assigned responsibility for the issue will be measured on his or her timeliness and the quality of the investigation. These metrics will be linked to annual performance reviews.

Management Commitment and Following Through

One of the key drivers to investigating complaints is the way we are structured around customer service. Our General Manager and Director - Customer Service candidates understand and embrace the importance of this process for all departments.

To ramp up our complaint resolution program, during Mobilization we will customers to ensure that we understand their expectations with regards to complaint and questioning handling. This information will be used to tailor the process to the MBTA Service to ensure we meet and exceed expectations..

Subsequently, one of the key topics at weekly meetings of the senior management team will be the volume, nature and resolution of customer complaints. Senior managers will be measured on complaints emanating from their departments, and these will form part of the appraisal process for each department leader.

Quarterly Customer Comment and Complaint Report

The Director - Customer Service will report on all complaints to the MBTA within five days of receipt of the complaint. We will also prepare a report on customer comments and complaints within 90 days of Commencement, and quarterly afterward. That report will include the following information:

- Achievements against the targets to handling and resolving complaints
- Progress on initiatives, action taken since the last meeting, planned actions for the next month
- Customer feedback

The Director - Customer Service will meet monthly with the MBTA's designated Customer Service Representative to review reports, performance indicators and corrective actions and to discuss any outstanding issues. Issues arising outside of the review meetings will be presented at our frequent meetings with the MBTA.

End-of-Year Evaluation

Using the year's quarterly reports, we will prepare an annual Customer Service Improvement Plan, due every year on October 1. . We will report on the following metrics and any others the MBTA-request:

- The number of complaints per month (in comparison with the figures of the previous months and of the same month in the previous year)
- The distribution of complaints per channel (phone, email, letter, in-person, social media) in comparison with the figures of the previous

months and of the same month in the previous year
- The distribution by reasons (in comparison with the figures of the previous months and of the same month in the previous year)
- The average reply time (in comparison with the reply time in the previous months and of the same month in the previous year)
- Weekly meetings held to identify and solve recurring issues
- Quarterly action plan formulated to ensure continuous improvement

We will also use these reports to identify areas for improvement in customer service, which can be fed into the Customer Service Satisfaction Plan and its updates

7.A.5. Service Monitoring

We believe that, in order to reverse the current trend and create a virtuous circle of increasing service quality, increasing patronage and increasing ability to invest, we will need to communicate our intentions to our passengers, as well as to the MBTA. This communication should be both proactive and interactive to demonstrate what we are doing and how we are making progress.

The Customer Service team will be responsible for capturing and analyzing the metrics which will demonstrate our progress in improving satisfaction over the course of the concession. These metrics will be designed in consultation with the MBTA, as part of our commitment to the transparent delivery of improvements in patronage and service.

We will use customer satisfaction surveys (described below) to capture passengers' perception of their journeys. However, the survey does not incorporate quantifiable key performance indicators (KPIs) from operation. We will monitor operational performance and service delivery through the Joint Performance Improvement Program (JPIP), as described in the Performance Analysis and Reporting section of our proposal, following our discussion of customer satisfaction indicators.

Understanding the Current Situation

While we have carried out an initial assessment of user and non-user attitudes to the service, we want to understand more fully customer satisfaction in a number of areas. During Mobilization, we will work with the MBTA to create an analytical framework and program of ongoing market research which will provide a statistically robust baseline to measure our progress over time. Once that baseline and metrics are agreed to, we will achieve a 5% increase in customer satisfaction in the third year of our operation.

Once we have mobilized, we will engage a market research company to carry out the surveys on trains across a fully stratified sample, taking into account peak and off-peak weekday services as well as weekends. We estimate that in order to create this baseline we will need to obtain approximately 5000 responses.

This market research will be combined with other data, such as on-time performance, effective complaints handling and materials inventory management, to create a "balanced scorecard" for both management and the MBTA.

Customer Satisfaction Metrics

Customer satisfaction metrics can cover an exhaustive number of elements. However, we propose a simplified list of metrics which are directly relevant to the Service that we will be providing to customers and the MBTA. A suggested list of metrics is shown in Figure 7-25. We believe these are metrics that customers truly value and which influence travel mode choice

Figure 7-25: Proposed Customer Service Metrics

Journey Segment	Suggested Satisfaction Metric
Satisfaction at the station	Provision of information on trains/ platforms Availability of staff Attitudes of staff Ability to buy a ticket Cleanliness Personal security/safety Car parking Connections to other public transport
Satisfaction on the journey	Journey speed Reliability/punctuality Frequency of trains Personal security Upkeep/repair of the train Cleanliness Comfort of seating area Room for all to sit/stand Provision of information Availability of staff Helpfulness/attitude of staff How well dealt with delays Ability of buy a ticket How well dealt with complaints/ feedback

Figure 7-25: Suggested Satisfaction Metric

Monitoring Our Service: Continuous Improvement

We will conduct our own customer satisfaction surveys, as described above, twice a year. This will allow us to understand seasonality issues as well as provide us with early warnings as to potential problems. We acknowledge and welcome the MBTA's desire to carry out its own surveys annually, as this will provide us with a useful check on our strategy and its potential to succeed. We also will share the findings of our surveys with the MBTA, giving us an opportunity to identify what programs have been successful, where we have opportunities to do more, and what remedial actions might be necessary.

Supporting our Formal Process with Interactive Service Monitoring Tools

We realize that formal surveys alone cannot provide the immediate feedback that a dynamic operation requires. We also recognize that our service needs to interact with customers in a more proactive fashion in order to increase visibility and engender customer loyalty. We will utilize a range of tools to engage with customers and build relationships. These tools include:

- Mystery rider surveys
- Manager field Surveys
- Online forums
- Outreach after disruption
- The use of social media

Mystery Rider Surveys

We routinely carry out "mystery rider" surveys at a number of our operations around the world, and we will undertake these surveys on a regular basis for the MBTA Service. This will ensure that all of our employees **Think Like a Passenger**, and achieve the specific goals of customer service. The mystery riders will sample all services (riding trains, contacting Customer Service, using the website and apps, testing Lost and Found, etc.) on a scheduled but unbiased basis. Systems and individual employees will be scored on response effectiveness. These mystery rider surveys will be in addition to the manager field surveys undertaken by our management.

We will undertake at least two mystery rider surveys per year.

Manager Field Surveys

Managers will be given at least one assignment per month during which the manager will ride a train, visit a ticket office, test the Lost and Found services, or ask questions of and interact with Customer Service Representatives and passengers. For each of these unannounced journeys or visits, the manager will be given a checklist, developed in partnership with the MBTA, to measure employee performance, as well as safety procedures and service conditions. The manager will be required to fill out a

CASE STUDY: VRE Online Forum

Each month, VRE hosts an Online Forum at noon on the first Wednesday of the month with the Chief Operations Officer, Operations Director and Manager of Government and Media Relations. Questions from passengers are collected online; answers are crafted and reviewed by management, then posted when the forum begins. This process ensures proper messaging and prevents abusive or confrontational language.

The questions and answers are shared with all employees, as well as questions that don't receive a response during the forum, so our employees will always know what customers are asking or concerned about.

Examples from a recent online forum:

Passenger: *This week, I went to try to get discounted tickets so I could bring my daughter and some friends to DC during the Spring Break. I am a monthly ticket holder of VRE and was disappointed when I learned VRE issues ID cards for each minor, a process that can take a week to complete. Very disappointed. I took the Metro instead.*

VRE Management: *We understand your frustration. When we made this policy, it was a time when discounted tickets were being abuses and this was the solution to protect revenue. It is not easy for occasional riders under 18, but we will continue to look for solutions to improve this in the future.*

Passenger: *Is Dave the Conductor that was on Train 302 ever coming back? He is missed and always kept riders informed and did a really good job.*

VRE Management: *He is currently helping us in the Alexandria office and will be back on the trains in the beginning of May.*

Passenger: *I heard on the radio news this morning that VRE is setting records for the highest number of citations issued for not having a valid ticket. I was surprised because I frequently watch conductors fail to give tickets to people caught riding without one. I suggest when conductors routinely let people get away with it, that will encourage many people to do the same thing.*

VRE Management: *We will continue to work with the conductors every day on this issue.*

Figure 7-26: VRE Online Forum Exchange

complete report based on his/her findings, and this information will be an input into the Issue Tracking Portal and be available to the MBTA.

Online Forums

We propose holding monthly online forums, as we do as operator of Virginia Railway Service. The VRE forums with the managers have successfully opened a new line of communication with our customers. Transcripts of the forums are posted for all to see. We will begin each forum with success stories/process improvements instituted since the previous month's session. Figure 7-26 outlines an example of how these forums work on VRE

Outreach after Disruption

A key element in our approach is to build trust with our customers. This is particularly tested during disruption, and we will therefore seek feedback from customers when there have been significant unplanned delays on our network. While the evidence suggests that the number of major delays is small, the impact tends to be high. On such occasions, we will mobilize our Customer Service Representatives and management team to be visible at major stations in order to connect with our customers and understand how well we performed during the disruption. We will particularly seek feedback on how well we

updated customers or provided other information such as alternative travel options.

The Use of Social Media

Our research suggests that the MBTA Service is seen as being out of step with how people experience technology in their work and home lives. While wifi is widely available on trains, we propose to transform the image of the MBTA Service through a more proactive engagement by management and customer service staff via social media. We will not only provide more information on our performance over social media, we will also actively seek and respond to views of customers via this means. Proactive and responsive use of social media will also create a level of trust that our management is listening to our customer base.

7.A.6. Performance Analysis and Reporting

The Service Monitoring Section above describes the range of tools and metrics we will use to help us to understand our service delivery from the customer perspective. However, the Operating Agreement reinforces the importance of monitoring performance for the full range of service, from train operations and reliability to customer service and overall professionalism. Accordingly, as required by the RFP, we will address our program for monitoring and improving operational performance within the context of customer service.

We will put in place a transparent approach to assessing and reporting operational performance. Performance monitoring will be driven by a dedicated team led by the Performance Manager, which is a new position we have created for the

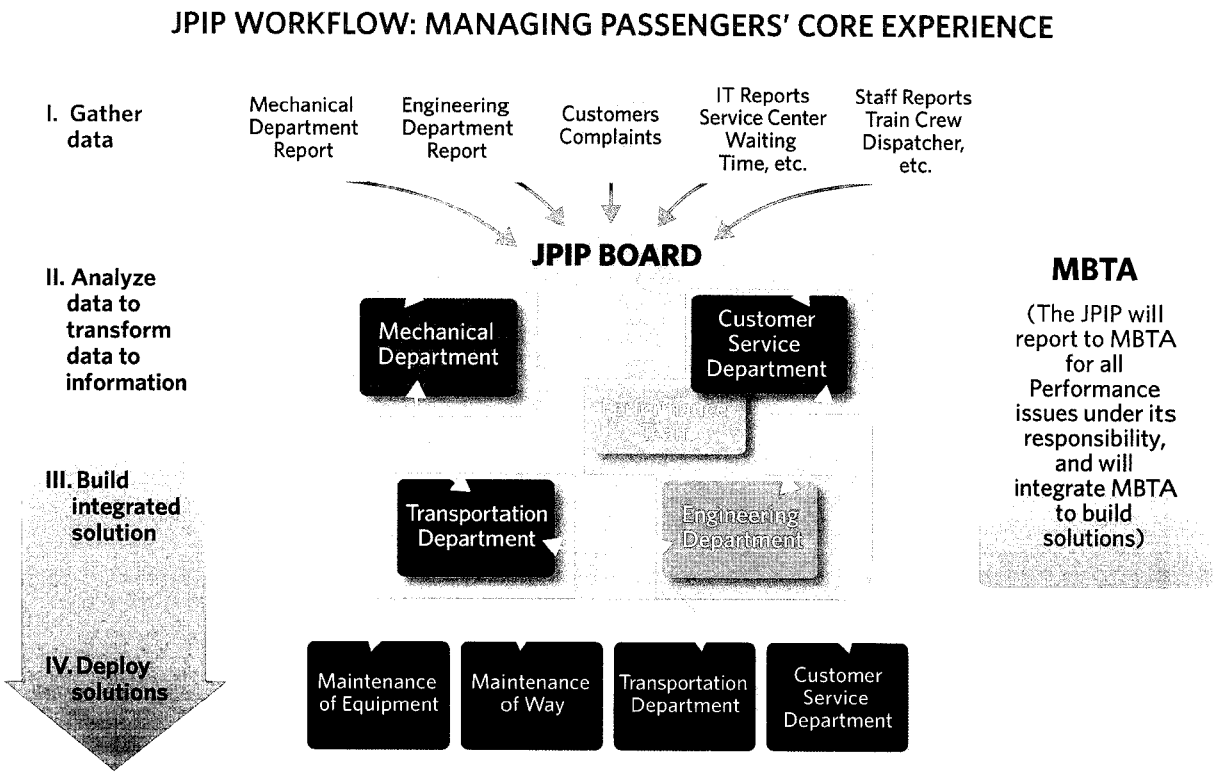

JPIP WORKFLOW: MANAGING PASSENGERS' CORE EXPERIENCE
I. Gather data
Mechanical Department Report
Engineering Department Report
Customers Complaints
IT Reports Service Center Waiting Time, etc.
Staff Reports Train Crew Dispatcher, etc.
JPIP BOARD
II. Analyze data to transform data to information
Mechanical Department
Customer Service Department
III. Build integrated solution
Transportation Department
Engineering Department
IV. Deploy solutions
Maintenance of Equipment
Maintenance of Way
Transportation Department
Customer Service Department
MBTA
(The JPIP will report to MBTA for all Performance issues under its responsibility, and will integrate MBTA to build solutions)

Figure 7-27: Joint Performance Improvement Program Organization

Department	Measure	How Measured
Transportation	On Time Performance	• Daily performance monitoring with monthly & annual targets
	Seat Consist	• Daily performance monitoring with monthly average targets
	Service Comfort and Amenities (Train Staffing, Fare Collection)	• Inspection report from Transportation department quality process • Daily dispatch monitoring report • External Audit by MBTA
Mechanical	Service Comfort and Amenities Part 1 (HVAC, door failure, lighting, toilet, cleanliness, communication system)	• Inspection report from mechanical department quality process • External Audit by MBTA
Engineering	Service Comfort and Amenities Part 2 (Station Maintenance, Snow and Ice removal).	• Inspection report from engineering department quality process • External Audit by MBTA
	Web application (availability and responsiveness)	• Automatic reporting through system
	Interactive Voice Reponse General (Availability Response Time Abandonment)	• Automatic reporting through system
	Operator Service Center (Availability, waiting time, Abandonment)	• Automatic reporting through system
	Operator Service Cneter User Satisfaction	• Automatic reporting through system
	Response and Resolution of incident communication (Acknowledgment Temporary fix of Resolution First Call Resolution)	• Issue tracking portal • Report from Customer Service Quality Process
Customer Service (Performance Team)	Reports reflecting Customer Service and Transport Department: • Timeliness • Accuracy	• Inspection report from Transportation department quality process • Inspection report from Customer Service Department Quality Representative • Audit by MBTA
	Complaints handling	• ITP reports automatically generated
	Response and Resolution of incident communication (Customers surveys)	• Automatic reporting through system

Figure 7-28: JPIP Targets and Measurements

MBTA Service. The team will work with the Transportation, Mechanical, IT and Engineering Departments, in order to efficiently and effectively identify and resolve operational difficulties.

Creating a Joint Performance Improvement Program

The key tool for managing performance is the Joint Performance Improvement Program (JPIP). The Performance Manager will own the JPIP, but its components will come from a number of additional departments as described above. Each department will designate a manager who will be part of the JPIP Board and will be responsible for establishing targets for the contribution of each operational component to performance. The flow of information and resultant actions arising from analysis of JPIP components is shown in Figure 7-27.

At the beginning of each year, the Performance Manager will write a Joint Performance Improvement Plan in consultation with all members of the program. This plan will include targets for each department to achieve and the different actions to be undertaken to achieve those targets.

The JPIP will primarily set targets for and monitor the aspects shown in Figure 7-28.

Analysis and Reporting

The essence of this process is the dynamic and iterative nature of reporting and analysis. By giving ownership of the JPIP to a Performance Team, they are able to monitor and analyze all data points and provide relevant and timely reports to the operational teams via the JPIP Board. This allows the board to continue to improve through the development of cost-effective solutions.

Data that supports the JPIP will be provided in IT reports that are available via the Issue Tracking Portal (e.g., complaints handling) and other reporting mechanisms, such as the daily train dispatch reporting and inspections by the Mechanical Department. The JPIP board will review all targets and actions on a weekly and monthly basis and communicate results to all departments and managers. We also propose monthly reporting with the MBTA to ensure that progress against the JPIP is continuous, transparent and proactively being managed in partnership with MBTA

Mobilization of Performance Monitoring Framework

Once given Notice to Proceed, we will mobilize a Performance Specialist to design and implement the JPIP framework. He will incorporate all requirements of the Service Level Agreements (SLAs) to be included in the JPIP, and review additional customer or operational elements. He will specify not only the standards to be attained, but also the reporting regime and interfaces between departments and with the MBTA.

The Performance Specialist will be supported in this by an Operations Specialist. The Operations specialist's primary function is to review the service and carry out detailed analysis of the timetable to define where operating performance improvements and service increases can be made with the existing fleet and staffing. We have already carried out an analysis of selected lines, such as Fitchburg, and believe that service can be improved through innovative timetabling and vehicle utilization.

Post July 1st, our Performance Team will be in place and will be responsible for the day-to-day operation of the JPIP. They will work closely with the other departments and the MBTA to ensure that this process is reviewed and improved as required.

Benefits of the JPIP Process

The JPIP process brings together all departments across the organization. It removes the "silo mentality" and creates a team culture. By leading this initiative from the Customer Service Team, we are promoting day-to-day operation from the perspective of our customers. Every team member, from IT operator to train cleaner, can see the impact of any role or responsibility on overall performance. The MBTA also is able to interact and proactively engage with us to create a virtuous circle of identification, problem solving, implementation and improvements.

Technology or Work Practice	Purpose	Managing integration
Customer Service Training	Staff customer awareness	Through our HR plan and annual appraisal system, identification of training needs
Conductor Companion	Real-time information for on train crew	Review of success of existing pilot with MBTA and further roll-out of staff, including training on technology and procedures
Social Media	Increasing customer interaction with commuter rail	Marketing and increasing public awareness through advertising and MBTA joint programs
Issue Tracking Portal	Responsiveness of Customer Service Team to complaints, suggestions, and lost & found	Training by IT
Lost and Found process	Transparent tracking of lost items	Training by IT on Issue Tracking Portal and integration with staff at South, North and Back Bay Stations
JPIP	Cross-organization performance improvement	Formation of JPIP Board; regular reporting and liaison with MBTA

Figure 7-29

Proactive management of performance across the organization and with the stakeholders will drive change from the status quo.

7.A.7. Integrating New Technologies and Work Practices as Introduced by the Operator or MBTA

We believe that new and effective management will reinvigorate the MBTA Service. Our Customer Service team will be supported by the introduction of new technologies and work practices that can help to train and enable staff to carry out their everyday jobs with great efficiency and professionalism. In addition, the MBTA is seeking to implement technology-based initiatives which will improve public transport provision and modernize work practices across the full network of services under its jurisdiction. As part of **Moving Further Together**, we will coordinate with the MBTA to ensure that new initiatives within our partnership are implemented efficiently and to the benefit of staff, MBTA and passengers alike.

Figure 7-29 sets out some of the key technologies or changes that we envisage affecting customer service in the first three years as the operator of the Service:

7.A.8. Provide Information Management, Material Management, Performance Analysis and Reporting

Information Management: Digital Reporting

The Information Technology Department will be responsible for maintaining the Digital Repository within which documents, plans, drawings and other data will be kept. It will be accessible by both MBTA as well as us.

Material Management

The Engineering Services Department will develop a material management process to optimize efficiency and value management.

Performance Analysis and Reporting

Our approach, deployment and monitoring protocols for managing the analysis and reporting

of performance data is contained within this plan in the Performance Analysis and Monitoring Section.

7.A.9. All Other Aspects of Communications with Customers

Customer Service for Everyone

We are an ADA compliant organization, and are intimately familiar with the details of existing rules and processes pertaining to this issue. We will train our employees, perform to the requirements, and vigorously audit performance to those standards. Given the nature of our business, we have vast experience in handling passengers needing assistance and those with disabilities, and we will be in compliance with all federal, state and local accessibility laws and regulations, and with all aspects of the requirements of the Americans with Disabilities Act.

We will consult with the MBTA to develop customized training for all customer service staff, and set aside 10% of the seats for any such training for MBTA managers and staff. Our employees will receive refresher training as necessary.

The training content will include:

- Specific MBTA requirements
- Define American with Disabilities Act
- Who is protected under ADA and the goals of ADA
- Transportation requirements under ADA
- What is "Reasonable Accommodation"
- The importance of clear audio announcements for the blind and visually impaired and visual information for the deaf and hearing impaired
- Breaking down attitudinal barriers
- Exceeding customer expectations for our special needs customers
- Tips for communication and offering assistance

Furthermore, we will notify the MBTA and the MBTA Department of System-Wide Accessibility within a maximum of 12 hours after our receipt of any customer comment or complaint related to the American with Disabilities Act. All personnel will be held accountable for complying with every aspect of the ADA and all related state laws. Non-compliance by any employee will be considered Conduct Unbecoming of an Employee. We will provide the MBTA with yearly reports and audits on ADA compliance.

Ways2Go 2.0

We applaud the launch of "Ways2Go," and offer our full commitment to help arrange and participate in training seminars offered under this program. We will represent the MBTA Service at these "how-to" sessions, and offer specific ideas in the training sessions on how best to access the MBTA Services.

We will partner with the MBTA to look for ways to expand "Ways2Go" within Boston and throughout the communities served by the MBTA Service. Our commitment will move even further: our Director - Customer Service will attend the monthly meetings of the Access Advisory Committee, to hear from customers, and to represent the interests of the MBTA Service to potential customers and members of the community. Members of the Advisory Committee will be invited to meet with our General Manager and top managers to discuss any specific issues regarding access to the Service. This is another example of our management approach of being visible, open to ideas from all customers and proactive in connecting with as many communities as possible.

CASE STUDY: Riding a Mile in Their Shoes

Since the first quarter of 2012 Keolis Lyon has created an awareness day to welcome disabled passengers to meet with our employees. The goal was to not just train our employees, but to give them the actual experience of what it is like to be a disabled customer.

The day is divided into two parts. The morning is devoted to a presentation of different disabilities (motor, auditory, visual and mental) and the difficulties of accessibility to public transport. Passengers then share stories of their transit experiences.

The afternoon takes place in transit. In turn, each employee is "given" a disability:
- Blindness (wearing a black headband and a cane)
- Wheelchair-bound
- Auditory (wearing a helmet)

Figure 7-30: Riding a Mile in Their Shoes

The employees then take to the transit system and once the course is complete, employees participate in a feedback session.

"This day is very rewarding on a professional level but also (and especially) a personal point of view. I became more aware of difficulties faces by people with disabilities in using public transport. — Chanta, Keolis Employee

"I learned that we should not be fooled by appearances, and most disabling is not necessarily one can think of. Hearing impairment is not very visible, but it is very isolating. The exchange with people with disabilities is very interesting and it gives us lessons in life and allows us to realize the hassles they face every day. — Etienne, Keolis Employee

Figure 7-30: Riding a Mile in Their Shoes

Riding a Mile in Their Shoes

Our best example of how we embrace all sectors of our ridership, and how committed we are to understanding and responding to passengers who need special assistance, is our "Riding a Mile in Their Shoes" sessions we hold in Lyon, France. (See Figure 7-30.)

We look forward to discussing with the MBTA this type of training session for customer-facing staff on the MBTA Service. In the years ahead, these sessions could potentially be expanded to include employees and customers from the other MBTA services.

Meet the Managers

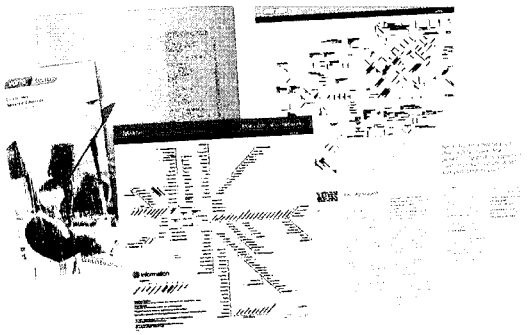
Increasing the availability and visibility of our managers for the public helps to reinforce our focus on communicating with our customers. We will conduct quarterly "Meet the Managers" sessions, to be held inside the larger stations or at easily accessible and available community locations, which will be more extensive than the program currently in place. Our managers will be highly visible during these events, and will be equipped with business cards and complaint/comment forms to hand out to customers (as they will also be encouraged to do during more informal interaction with passengers). Results of these "Meet the Managers" sessions (transcripts, videos, etc.), will be made available to the MBTA to disseminate as it sees fit (social media, MBTA website, etc.).

Customer Service Charter

Working in partnership with the MBTA, we will develop a Customer Service Charter, which will serve as a comprehensive guide to all aspects of the Service. We will make this document available to customers in hard copies and digitally, and it will be publicly posted in visible, appropriate locations.

This Charter will be patterned after our Customer Service Charter for our Yarra Trams operation in Melbourne, Australia, a city that has a tourism

advertising trade arrangement with the City of Boston. The Charter serves as our guiding principle for operating the network and it provides key passenger service information in one, simple-to-read document (see Figure 7-31).



Maps, Fares, and Timetables
Ticketing Options
Performance
Customer Service Information
How to Contact Us

Figure 7-31: Examples of Customer Charters

Customer Newsletter

An effective way of reaching out to customers is through a quarterly or monthly newsletter. We have produced a monthly newsletter called "RIDE" for our customers and employees of Virginia Railway Express, which includes information regarding on-time performance, rail line initiatives, and the overall state of the service (see Figure 7-32). It also lists various community events (and how to easily access them with our trains), along with advertisements, a crossword puzzle and short, seasonal-based articles of general interest.

We propose to work closely with the MBTA to produce a similar, Special Edition newsletter to be distributed to customers, placed on the MBTA website, and pushed out through social media in the days leading up to launch of the new service on July 1, 2014. Suggestions from customers and employees will be solicited and considered for this Special Edition and any future editions of the

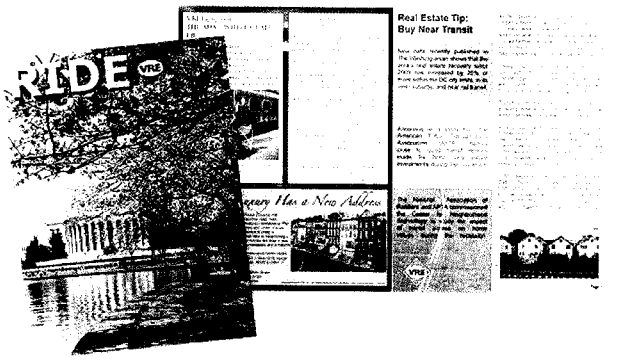


Figure 7-32: Customer Newsletter

newsletter. Potential advertisers will directed to an advertising page similar to the one used by VRE.

Operator Service Center

In full adherence to all requirements set forth in the RFP, we will engineer, equip and staff an Operator Service Center, which will serve as the primary conduit of communication for customer questions, complaints, issues and suggestions. We will staff and operate the Operator Service Center for seven days a week between the hours of 06:30am and 8:00pm.

The Operator Service Center will house innovative technology environments to aid Customer Service Representatives in providing information and handling customer complaints and suggestions:

- A digital **Call Recording System**, which will date stamp all recorded calls and maintain copies and digital storage of calls to prevent deletions; all calls will be made available to the MBTA
- An **Interactive Voice Response System** (IVR), which will allow callers to press pre-selected choices that will facilitate queue-based routing to the appropriate department or person; the IVR can also be programmed to interface with external databases, such as the Issue Tracking Portal
- Our **Issue Tracking Portal**, which will generate tickets upon receiving call(s), email or other communication related to service request

Ticketing

We will provide ticketing services on board all trains and at all stations with staffed ticketing booths, as required in the RFP. The current operating hours of the ticket booths at South, North, and Back Bay Stations are:

- Monday-Friday, 6:00am to 10:00pm
- Saturdays and Sundays, 7:00am to 10:00pm

We are not proposing an immediate reduction in hours at the ticket booths, but we believe we can achieve greater efficiencies by increasing use of ticketing technology already in place and by introducing new technologies we have used successfully elsewhere to make ticket purchasing, fare collection and fare verification more efficient.

Building Upon the Success of the mTicket

The introduction of the MBTA mTicket app for commuter rail and ferry lines has been a success, with more than 100,000 ticket purchases by 35,000 unique users in its first three months. This application is a good first step toward reducing printing costs, cash transactions and the need for more vending machines.

While the mTicket achieves unquestioned efficiency in the buying process, the fare verification process, even with the new technology, remains the same: a conductor or assistant conductor looks at a cell phone instead of a paper ticket or pass. There are ways to improve this process by applying proven technology, including equipping conductors and assistant conductors with mobile devices that can scan QR codes to verify mTickets, accept credit card and debit card payments, and include up-to date service information

We look forward to discussing this idea with the MBTA.

Collecting Revenue/Fare Verification

Our goal is that, wherever and however possible, passengers travel on the MBTA Service having purchased a ticket before getting on the train. If it is not possible to purchase a ticket through no fault of the customer, our objective will be to ensure that the proper revenue is collected.

Our field researchers have observed conductors and assistant conductors working with an antiquated ticket selling process. Ticket collection and revenue protection are among the primary customer service responsibilities for conductors and assistant conductors, so it is critical to work with the MBTA to improve this process. We will:

- Undertake closer on-train observation and monitoring of train crews, in order to pinpoint training opportunities on the level of ticket verification.
- Certify that all personnel are properly trained and knowledgeable about the fares and ticketing system, including how to account for and collect revenue.
- Enlist individual conductors, assistant conductors and their union in an initiative to develop low-cost, short-time-frame improvements. conductors and assistant conductors will be asked to help develop individual plans.
- Conduct ticket verification and revenue collection in such a way that it does not lose sight of the principles of good customer service.

We recognize the importance placed by ticket-holding customers on seeing conductors and assistant conductors taking effective measures to ensure that fare evasion is detected and dealt with appropriately.

Ticketing Solutions for the Future: Moving Further Together

We understand that the integration of the Charlie Card into the MBTA Service is not planned at this time, but we look forward to working with the MBTA to find creative and effective solutions to streamlining the ticket purchasing and revenue collection processes in future years of our relationship.

As part of our commitment to passenger-friendly solutions and improving the integration of public transport, we promote ticketing solutions that simplify ticket purchasing and create fluid and

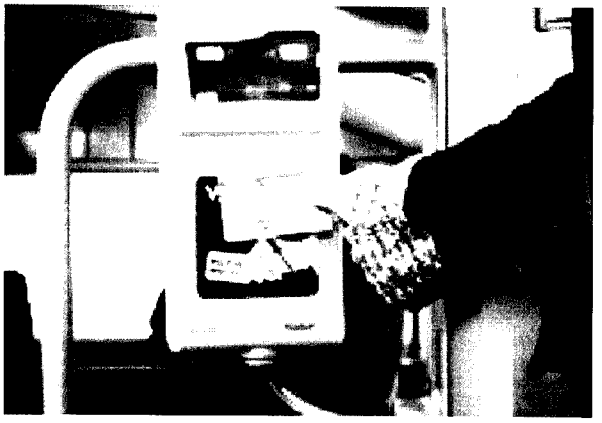


Figure 7-33: Ticketing Solutions

seamless connections between modes (see Figure 7-33).

We can develop smart cards with pay-as-you go systems or integrating monthly or weekly passes. Everything is geared towards encouraging passengers to adopt new technology and chip cards rather than buy individual travel tickets. For example:

- In Tours, France, we deployed a post-payment program where customers are debited on the 15th of the month for the use of the previous month.
- In Rennes, France, we integrated the "KorriGo" card on the regional rail network into the urban transport network of metro and bus, as well as a new bike rental service.
- In the London area, the Southern train franchise successfully introduced the "Oyster Card" pay-as-you-go system, with which passengers can also travel on the Underground and bus network.
- In the future, we can evaluate other ambitious solutions, such as either "gated" or "fare box" approaches similar to processes on subways and buses. We will rely on our technology teams across our many services around the globe to propose best practices as long-term solutions to the ticket selling, fare collection and fare verification processes.

Social Media

Any company providing products or services to the public is constantly judged, commended, criticized and discussed on social media, with or without the company's active involvement. We believe that driving interactions with existing and potential customers on social media will create increased involvement and interest in the Service.

Working closely with the MBTA, we will review, develop and manage all current and ongoing online and social media campaigns. Our IT department will develop social media functions, such as integrating Facebook, Twitter and blogs into our website. We will also design, launch and provide regular content for a General Manager's blog. This will be the responsibility of the Customer Service Communications and Marketing Manager.

Facebook

Facebook remains the most popular social media website. An active Facebook page can contribute positively to the sense of community for customers. The key to maximizing the impact of your Facebook page is having the right content strategy and posting on a consistent basis. We will ensure that the content is updated and refreshed so "friends" feel connected to the MBTA Service and other users.

We recommend establishing monthly editorial and event calendars for the MBTA Service Facebook page. These calendars will be the foundation for our content strategy, and will also allow for more instant response for unexpected opportunities that arrive quickly. In addition, we will use the Facebook page to:

- Post local activities and events, including information on how the MBTA Service can get customers there
- Create dialogue between customers and Facebook/Twitter pages
- Encourage user-generated content and dedicated promotions for Facebook followers of the commuter rail page on an ongoing basis
- Take advantage of special customized design features that Facebook offers, such as

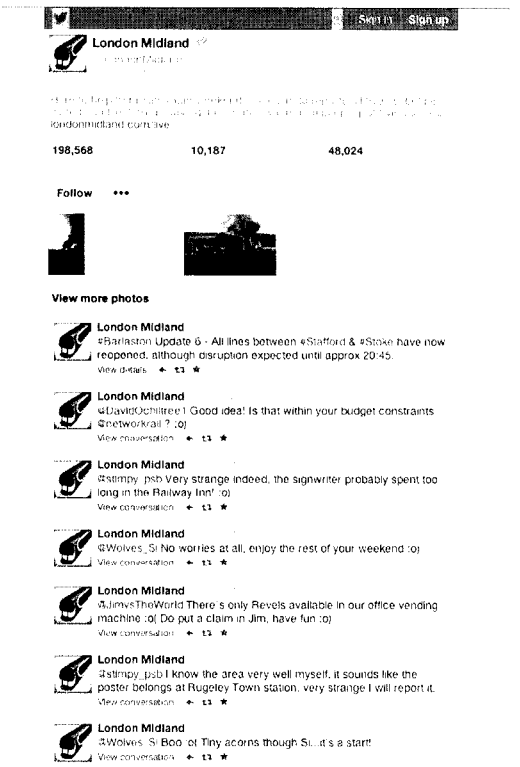


Figure 7-34: Our Award Winning Twitter Feed

designing a Welcome Page, and providing tabs for Twitter and YouTube pages

Twitter

As with Facebook, the right content strategy, as well as a complete understanding of the "rules of engagement" for this extremely interactive medium, is essential to an effective Twitter presence. Its primary benefit is to keep customers apprised of schedules, delays and disruptions and to get feedback directly from customers. We believe the MBTA Commuter Rail Service Twitter page needs to be much more visible and responsive to complaints.

Using our award-winning experience from one of our UK operations, our Twitter activity will include:

- Following and engaging with key influencers in targeted audiences
- Using Twitter search capabilities, including hashtags, to identify, develop and engage commuter rail customers
- Utilizing Twitter search tools to monitor who is talking about the MBTA Service
- Writing updates that encourage conversation
- Responding regularly to people who are talking about the MBTA Service

Our London Midland train operation has been singled out for a National Rail Award in the category of "Putting Passengers First." We were recognized for the quality of world-class customer service through the use of Twitter, which has allowed customers to tell us about problems more quickly and us to keep passengers informed during disruptions (see Figure 7-34). The result is an effective two-way communication with our operation and our customers. The Twitter feed for London Midland has grown to 48,000 followers.

Blog

The current operator's General Manager does an occasional blog entitled "Rail Innovations." As of July 18, there have been a total of seven postings for the entire year. The blog page also has a link to the @MBCR Twitter feed, as described above.

We will work with the MBTA to launch and provide ongoing content for a blog, perhaps from the General Manager, which will help spotlight key messages and themes for the MBTA Service. We propose to:

- Assist in blog design and development
- Work to determine the appropriate "voices" for the blog
- Secure guest writers (customers)

We have had success developing blogs for each of our lines in the Transilien Train Service in France. The blog is a great way to interact with customers, not just to tell them of initiatives and events of interest, but also as another avenue through which customers can alert us to a problem.

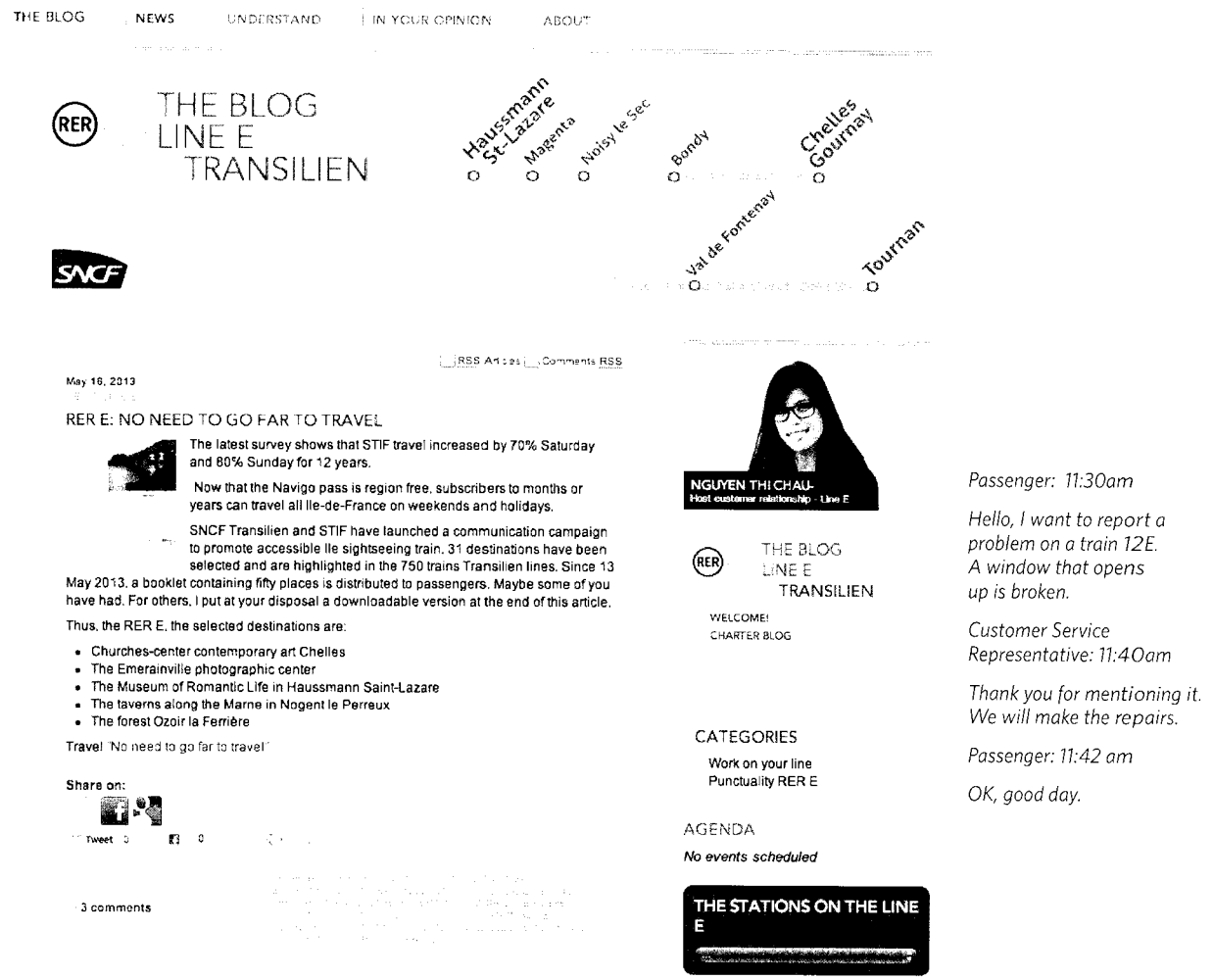

THE BLOG
NEWS
UNDERSTAND
IN YOUR OPINION
ABOUT
RER
THE BLOG
LINE E
TRANSILIEN
Haussmann St-Lazare
Magenta
Noisy le Sec
Bondy
Chelles Gournay
Val de Fontenay
Tournan
SNCF
RSS Articles
Comments RSS
May 16, 2013
RER E: NO NEED TO GO FAR TO TRAVEL
The latest survey shows that STIF travel increased by 70% Saturday and 80% Sunday for 12 years.
Now that the Navigo pass is region free, subscribers to months or years can travel all Ile-de-France on weekends and holidays.
SNCF Transilien and STIF have launched a communication campaign to promote accessible Ile sightseeing train. 31 destinations have been selected and are highlighted in the 750 trains Transilien lines. Since 13 May 2013, a booklet containing fifty places is distributed to passengers. Maybe some of you have had. For others, I put at your disposal a downloadable version at the end of this article.
Thus, the RER E, the selected destinations are:
Churches-center contemporary art Chelles
The Emerainville photographic center
The Museum of Romantic Life in Haussmann Saint-Lazare
The taverns along the Marne in Nogent le Perreux
The forest Ozoir la Ferrière
Travel "No need to go far to travel"
Share on:
Tweet 0
0
3 comments
NGUYEN THI CHAU
Hoet customer relationship - Line E
RER
THE BLOG
LINE E
TRANSILIEN
WELCOME!
CHARTER BLOG
CATEGORIES
Work on your line
Punctuality RER E
AGENDA
No events scheduled
THE STATIONS ON THE LINE E
Passenger: 11:30am
Hello, I want to report a problem on a train 12E. A window that opens up is broken.
Customer Service Representative: 11:40am
Thank you for mentioning it. We will make the repairs.
Passenger: 11:42 am
OK, good day.

Figure 7-35: An Example of Our Blog

Figure 7-35 below presents a screenshot of the blog and an example of a recent exchange with a customer:

The point of this exchange is the speed of response to a customer's complaint. We will bring this kind of innovation and customer outreach to the MBTA Service. The Customer Service Communication and Marketing Manager will be responsible for assigning and managing all content on Facebook, Twitter and blogs.

Community Initiatives

Our Community Initiatives are designed to enhance the MBTA Commuter Rail Service's reputation as a community partner. Each initiative is a cost-effective way to get customers excited about being associated with, and regular riders of, commuter rail.

Commuter Rail Riders Community

We believe customers want a say in how something as important as their daily commute is handled, but we also believe most commuters feel disenfranchised in this regard. In order to

help us **Think Like a Passenger**, we will organize and oversee a virtual Commuter Rail Riders Community that will be our customers' direct link to customer service management and staff.

The Community Rail Riders Community will:

- Host online forums and chats with customer service management and MBTA leadership
- Have special "Members Only" programs to engage members and encourage new membership
- Profile "Commuter Rail Rider of the Month," "Commuter Rail Employee of the Month" and "Commuter Rail Community Partner of the Month," all of which will highlight positive, compelling stories of interest to the Service's customers
- Develop sponsorship opportunities for local businesses to help fund and receive recognition for station beautification projects, youth team trips to tournaments, etc.
- Encourage local retirees and railroad buffs to serve as our "Ambassadors"
- Hold school events/off-peak train rides/field trips/safety seminars
- Enable local art displays at stations
- Participate in local job fairs/training programs

Engaging Customers on the Fairmount Line

We see a particularly compelling opportunity as the MBTA renovates and reinvigorates the Fairmount Line. The upgrade and opening of new stations, reduced fares, and the recently launched study on the impact of improved service on the community sends an important message to the community.

We propose using this initiative to further the MBTA Commuter Rail Service's visibility in neighborhoods such as Dorchester, Roxbury and Mattapan. As evidence of this commitment, the Director of Customer Service will reach out to community organizations such as the Greater Four Corners Action Coalition and to the Boston Foundation to help us understand neighborhood needs and to encourage use of our trains.

Commuter Rail: Partner in a Caring Community

The recent outpouring of concern and support in the wake of the Boston Marathon bombings has proven that the Boston area is second to none when it comes to helping those in need. The One Fund Boston story is a tribute to the charitable soul of the people we live, work and commute with every day. The "Partner in a Caring Community" campaign is designed to position the MBTA Commuter Rail Service as a true partner in improving our way of life in Massachusetts and Rhode Island. Figure 7-36 provides an example of one of our community programs developed for the Virginia Railway Express.

In the same spirit as the "Homegrown Commuter Rail Initiative," the "Partner in a Caring Community" program will:

- Promote, support and hold charitable events
- Create partnerships with major area charitable organizations, such as:
  - The Jimmy Fund
  - Shamrock Foundation
  - Globe Santa
- Celebrate community and charitable efforts of our employees and unions
- Identify possible media partnerships with newspapers, television, and radio

Branding and Marketing Responsibilities

We see an opportunity to refine the MBTA Commuter Rail Service brand, one that will clearly define it to current customers and the thousands of people stuck in traffic on the highways day after day, year after year. The message will align with the MBTA's Customer Bill of Rights, promising a safe, comfortable and dependable ride, provided in clean surroundings by an innovative organization staffed by people who are courteous and professional.

A Marketing Partner for the MBTA

Speaking to our goal of **Moving Further Together**, we will partner with the MBTA to develop marketing campaigns that will deliver a message of commitment to customers and their

CASE STUDY: VRE AND THE MANASSAS RAIL FESTIVAL

The City of Manassas, Virginia is a railway town, with ties going back as far as the Civil War, and it played a key role in delivering supplies to both Union and Confederate Armies. The Manassas depot is alive still today with VRE and Amtrak customers alike. For nineteen years, VRE and Amtrak have celebrated this rail heritage the first Saturday in June with the Manassas Rail Festival, an annual event that draws over 30,000 railway enthusiasts. This family friendly event offers something for everyone—from the train novice to the seasoned buff, we have elaborate train displays, speeders, antique farm equipment on the museum lawn, over twenty vendors, and activities that celebrate one of the greatest transportation contributions made to our country.

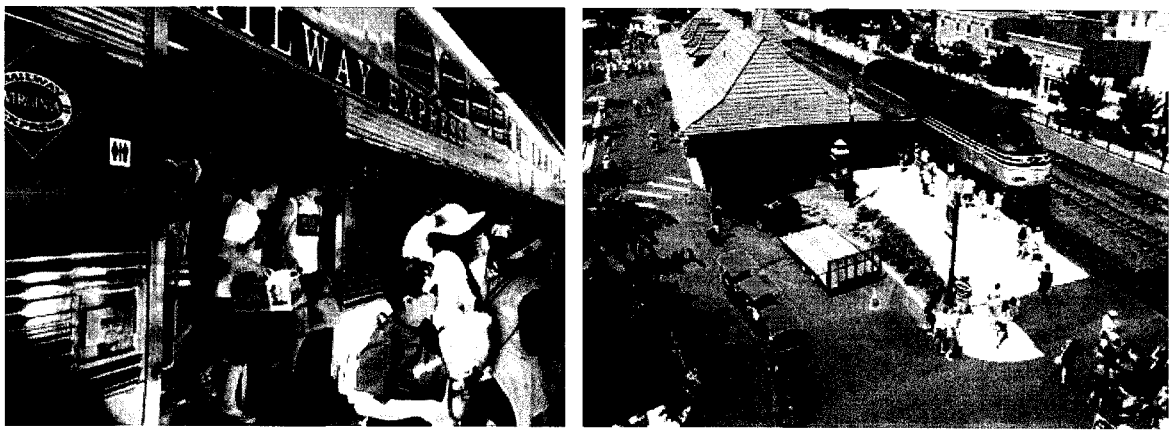


Figure 7-36: VRE & Manassas Rail Festival Case Study

communities. We understand that marketing alone will not compel people to park the car and take to the rails. But a coordinated effort with the MBTA will be a necessary step toward increasing awareness and use of the service.

As required by Section 3.7 of the Operating Agreement, we will consult with and get approval from the MBTA's General Manager or her designee before launching any kind of advertising, marketing or other public promotions initiatives. We will also fulfill our contractual obligation to install MBTA-approved promotional materials or public information notices at stations and on trains as directed by the MBTA.

We understand that new revenue streams are critical to help fund any kind of marketing initiatives, and it is important to find new content sponsors, conventional advertisers and vendor partnerships to grow as much revenue as possible. Revenue opportunities may be realized by approaching existing sponsors as well as potential clients that may prefer digital advertising, which could be tied to the operator website and/or other digital properties. We look forward to the opportunity to work with the MBTA to identify new potential third-party advertisers who will appreciate a renewed service commitment to commuter rail riders, and will want to participate in our growing train service.

As part of our commitment to improving marketing, we will, in partnership with the MBTA and any key third parties:

- Hold quarterly marketing meetings with the MBTA and advertising/marketing partners
- Install MBTA-approved promotional materials or public information notices on the Service Property and Equipment
- Cooperate with MBTA contractors in developing and/or applying MBTA-sanctioned advertising and other public display materials to the Service Property or Equipment
- Assist the MBTA in participating in community outreach programs and other community communications, as described above
- Solicit and write stories and events calendars for the Customer Service website and Customer Service newsletter

Media Communications Events

We also understand the sensitive nature of communicating with the media about the MBTA Commuter Rail Service and/or other topics related to the MBTA. We will immediately inform the MBTA of any communication inquiries, and we will not engage any media without written consent from the MBTA. As part of this commitment, we will complete a "Media Communications Event" document for MBTA approval within 90 days of Notice to Proceed.

Savings Calculator

One marketing idea we believe can be effective is the launch of a Savings Calculator to distribute through all customer communication channels.

With Boston recently ranked the 10th worst American city for rush hour tie-ups, and with Boston leading the nation in year-to-year highway congestion level increases (traffic data firm INRIX, May 2013), more needs to be done to convince drivers to "make the switch" to commuter rail. An effective tool can be a Transit Savings Report and Calculator, which documents the economic advantages of leaving the car at home and taking the train. A Transit Savings Report and Calculator can provide a powerful and cost-effective way to reach out to potential customers.

The American Public Transportation Association website (www.apta.com) currently has a basic Transit Savings Report and Calculator that is easy to use (but hard to find), and could be used as a starting point for a more sophisticated and visible tool to market to both customers and potential customers.

The program calculates both the yearly cost of commuting by car and the yearly cost of commuting by public transportation. For example, if a commuter lived in or near Stoughton and worked in downtown Boston:

- Current price of gasoline: $3.50/gallon
- Car MPG: 20
- Medium-sized car
- Roundtrip mileage of daily commute: 40
- Daily cost of parking: $25.00
- Daily cost of round trip Zone 4 fare: $14.50 + $4.00 for parking = $18.50

According to the calculator, the yearly cost of commuting by car is $8,196.48, while the yearly cost of using commuter rail is $4,440.00. The savings from using commuter rail in this example are $3,756.48.

We propose developing, in partnership with the MBTA, a more robust model of the Transit Savings Calculator that would include the above data inputs, but would be enhanced by drop=down menus of specific station locations (and a "Station Locator" based on the commuter's address, including a link to that station's profile on the MBTA website). We could also calculate and assign a "cost of delay" factor, which would calculate a commuter's actual cost of sitting in traffic, versus the savings from taking the train.

The marketing implications, social media potential and web analytic opportunities are plentiful, and we look forward to discussing the concept and its execution.

7.A.10. Draft Customer Service Satisfaction Plan

We will prepare and submit to the MBTA a Customer Service Satisfaction Plan no later than 90 days after the Notice to Proceed. The Plan will detail our initiatives for different service areas which will impact on customer satisfaction, how metrics will be measured and over what time frame. We will also identify which department will own each initiative.

We have prepared a draft of the Customer Service Satisfaction Plan, which is included as Appendix 7-2. We will agree to the content and metrics of the plan with the MBTA during Mobilization. Driven by our desire to establish a baseline of customer satisfaction early in our tenure, we will welcome the opportunity to update our plan within the first six months in order to establish with more clarity the measures of success in some areas. The Plan will be updated and submitted to the MBTA each year before March 12.

As required, the Customer Service Satisfaction Plan Update will be submitted to the MBTA no later than March 12 of each year of the Operating Agreement. The Customer Service Satisfaction Plan Update will be based on findings from:

- Annual MBTA Customer Service Satisfaction Survey
- Our twice-yearly Customer Service Surveys
- Findings from Mystery Shopper Surveys
- Quarterly Comment and Complaint Reports
- Direct feedback from the MBTA

These findings will be our guidelines for the Annual Customer Service Improvement Plan, which will be submitted for approval no later than October 1 in each year of our operation.

7.B. BEST PRACTICES SUPPORT

Our initiatives for improving Customer Service on the MBTA Service have been described in detail in this Customer Service Plan and are summarized in the table in Figure 7-37.

Initiative	Innovative	Best Practice	Beneficial to MBTA Customers	Cost efficient	Support
ORGANIZATIONAL					
A New Day on Day One: All Hands on Deck			✓	✓	• Visible management on trains at stations will signal a new day of management involvement in providing excellent customer service • Cost-neutral; the hands-on approach is part of every manager's role and responsibility
New Uniforms and Badges for Staff and Management	✓	✓	✓		• Improved branding and identification of staff and management raises the level of responsibility among all employees • At our other operations around the world, new uniforms have been shown to put employees in a better light with customers
Management Structure and Approach	✓	✓	✓	✓	• Experience across our other operations has shown customer focus governance leads to improvement in performance across the organization • Creating the position of Performance Manager in our Customer Service Department links Customer Service and the Transportation Department, furthering the goal of accurate development and measurement of all customer satisfaction metrics • Restructuring of department is cost neutral
Manager Field Surveys	✓	✓	✓	✓	• Innovative management commitment to continuous improvement
TRAINING					
Training and Individual Commitment	✓	✓	✓		• Investment in people in training is recognized worldwide as a way of enhancing staff loyalty and commitment • Innovative training and management oversight will lead to greater accountability throughout the organization • Our training practices create greater awareness of customer service standards and a culture of continuous improvement • Requiring an individual customer service plan from every employee will raise accountability and the level of customer service
INFORMATION					
Operator Website		✓	✓		• Provides easy=to=find information for customers who may not use other MBTA services • Decreases the time it takes for complaints to be resolved

Figure 7-37: Our Customer Service Initiatives

continues next page

Initiative	Innovative	Best Practice	Beneficial to MBTA Customers	Cost efficient	Support
ORGANIZATIONAL					
Checking the PTIS LED Signs		✓	✓	✓	• Accurate and timely information is a critical component of customer satisfaction • The PTIS is the principal tool by which we provide real=time information to passengers and upon which we will measure customer satisfaction • Use of cleaning crews to check PTIS signs adds another layer of oversight
Real=Time Information for Conductors	✓	✓	✓		• Surveys indicate lower levels of satisfaction with respect to conductor knowledge and real-time information updates • Conductor Companion pilot test will be evaluated • Other innovative approaches to technology for conductors will be explored in partnership with the MBTA
Information During Disruptions		✓	✓	✓	• Best practices from Lille and Lyon (as well as other operations) demonstrate the value of having a clearly defined and well-understood process
Safety and Security Information		✓	✓		• Safety is a core corporate value across all of our operations worldwide
App Development	✓	✓	✓		• Transilien application as a best practice, to be tailored to the MBTA Commuter Rail Service
INFORMATION					
Social Media	✓	✓	✓		• London Midlands award-winning Twitter page as a best practice to be tailored to the MBTA Commuter Rail Service • Transilien blog as a best practice in two-way engagement with customers and improved response to complaints • Social media initiatives can be achieved with little or no cost
Special Events Planning		✓	✓		• SNCF Weekend Excursion brochures as a best practice that can be applied to attractions in Eastern Massachusetts and Rhode Island
CLEANLINESS					
Operation Deep Clean	✓	✓	✓		• Cleanliness of trains is a key factor of customer satisfaction, and is measured at transit systems worldwide • Aggressive cleaning regimen is a best practice that resolves a critical barrier to customer satisfaction

Figure 7-37: Our Customer Service Initiatives, cont.

continues next page

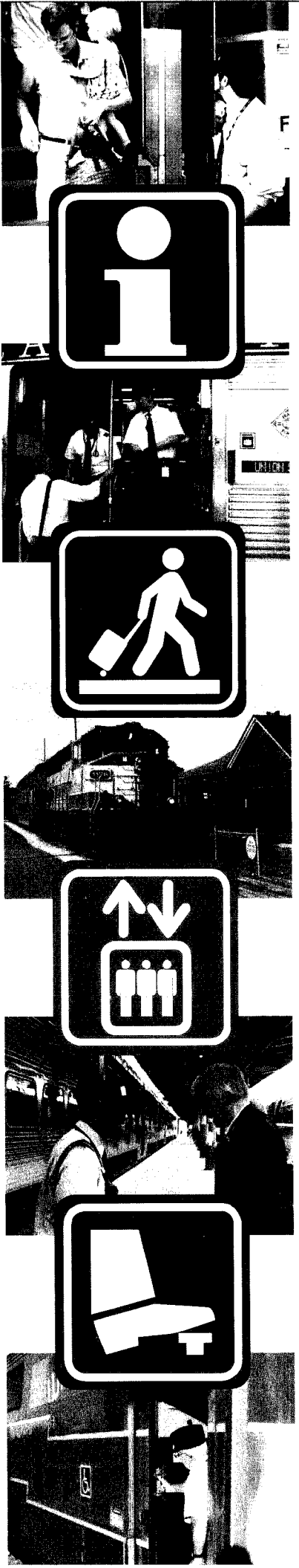
Initiative	Innovative	Best Practice	Beneficial to MBTA Customers	Cost efficient	Support
CUSTOMER INTERACTION					
Issue Tracking Portal	✓	✓	✓	✓	• Use of proven technology for efficient management of tracking and resolving complaints • Benefits to customers include faster response to and resolution of complaints, and better tracking and recovery of lost items
Customer Service Charter	✓	✓	✓	✓	• Best practice experience, e.g., Yarra Tram and London Midland
Complaint and Suggestion Process	✓	✓	✓		• Internationally recognized customer satisfaction metric for mass transit systems • Measuring, managing and improving the complaints and suggestions processes through technology and renewed staff and management focus • Customer Satisfaction surveys (two by the Operator and one by the MBTA) each year will measure improvement against agreed-to metrics • Issue Tracking Portal will streamline the complaint-resolution cycle to allow us to meet and exceed the requirements of the RFP
PERFORMANCE					
Joint Performance Improvement Program	✓	✓	✓	✓	• Internationally recognized performance management tool including key elements of customer satisfaction

Figure 7-37: Our Customer Service Initiatives, cont.

continues next page

Initiative	Innovative	Best Practice	Beneficial to MBTA Customers	Cost efficient	Support
COMMITMENT TO CONTINUOUS IMPROVEMENT					
Joint Metrics for MBTA Annual and Operator Biannual Customer Service Satisfaction Surveys	✓	✓	✓		• Establishment of best practices in customer satisfaction surveys • Creates strong partnership with MBTA as we work together to devise a consistent set of metrics for customer satisfaction
Mystery Rider Surveys	✓	✓	✓		Recognized best practice for validation of customer satisfaction
Post Disruption Surveys	✓	✓	✓		Best industry practice for improving management of disruptions
Online Forums	✓	✓	✓	✓	Management quarterly online at Virginia Railway Express as a best practice No cost to MBTA
Community Outreach Through Open Data	✓		✓	✓	Innovative approach to seek new ideas and to reach out to local entrepreneurs Provides outreach to potential new customers in fast-growing local industry
Community Initiatives	✓	✓	✓	✓	Industry best practice for regional railways; promotes inclusiveness across commuter rail communities

Figure 7-37: Our Customer Service Initiatives, cont.



SECTION 8
Management Plan
Evaluation Factor Information

SECTION 8 — MANAGEMENT PLAN EVALUATION FACTOR INFORMATION

Contents

8. INTRODUCTION 2
I. Executive Summary 2
II. The MBTA's Needs as We Understand Them 12
III. Our Assessment of the Current Situation 15
IV. The Results We Will Deliver 15
OUR MANAGEMENT PLAN 16
8.A. ORGANIZATIONAL CHART LISTING THE NAMES, REPORTING RELATIONSHIPS, TITLES AND GEOGRAPHIC LOCATION FOR THE IDENTIFIED KEY MANAGEMENT POSITIONS 17
8.B. DESCRIPTION OF HOW THOSE FUNCTIONS WILL BE MANAGED IF DUTIES ARE TO BE DISTRIBUTED IN A MANNER OTHER THAN THAT DESCRIBED IN B13.2 (SUCH AS THE COMBINING OR SPLITTING OF FUNCTIONS, IF PERMITTED BY THE CONTRACT), IF NECESSARY 28
8.B.1. Material Management and Procurement Services 28
8.B.2. Quality Assurance and Management System and Environmental Services 33
8.B.3. Operational and Financial Reporting — Key Performance Indicators 45
8.C. DEMONSTRATION OF ABILITY TO PROVIDE EFFECTIVE EMPLOYEE AND LABOR RELATIONS 46
8.C.1. A plan for complying with the labor provisions detailed in the Operating Agreement, including Schedules 3.9 and 3.10 and other requirements relating to the existing commuter rail workforce 47
8.C.2. History of Positive Working Relationships and Harmony with Employees and their Representatives 55
8.C.3. Compliance with prevailing wage statutes 58
8.C.4. History of administration and application of collective bargaining agreements and adherence to applicable labor laws 58
8.D. BEST PRACTICES SUPPORT 59

8. INTRODUCTION

I. Executive Summary

Over the past four decades, the MBTA has invested billions of dollars in its commuter rail system, including the very far-sighted step in the 1970s of acquiring ownership of virtually the entire network of lines over which its trains operate — and then continuing to add to that ownership portfolio as the service has expanded over time. Yet the ridership response to this tremendous level of investment has been uneven, at best, and has not lived up to expectations. As represented below, the last 10 years (2003-2012) have witnessed a 17.2% ridership growth for all MBTA services. At the same time, total U.S. commuter rail ridership has grown by 14.7%. Over this same period, ridership on the MBTA commuter rail service has **decreased** by 10.5%, from 40.6 million riders in 2003 to 36.36 million in 2012. Accompanying this decline, commuter rail ridership has **decreased** as a component of total MBTA ridership by 23.6%, while the cost of the commuter rail service, as billed to the MBTA, has increased by 32.2%, from $207 million in 2003 to $273.6 million in 2012.

Key Figures:

- National commuter rail ridership: up 14.7%
- MBTA total ridership: up 17.2%
- MBTA commuter rail ridership: down 10.5%
- MBTA commuter rail ridership as a percentage of total MBTA ridership: down 23.6%
- During this 10-year period, the annual operating cost of the commuter rail service, as billed to the MBTA by MBCR, has gone from $207 million to $273.6 million, an increase of 32.2%

Of equal, if not greater concern, as shown below, of the six major commuter rail systems in the U.S. (the Long Island Rail Road (LIRR), Metro-North, New Jersey Transit, Metra, SEPTA and the MBTA), all serving cities where traffic congestion has seen significant increases during the past decade, only the LIRR and the MBTA have experienced ridership decreases, with the MBTA's decrease being triple the magnitude of the LIRR's. The system closest to the MBTA's in total ridership, SEPTA in Philadelphia, enjoyed a 26.6% increase during this period.

	Commuter Rail Ridership		MBTA Total Ridership	% Total MBTA Ridership
	National	MBTA		
2003	406,802,000	40,612,172	340,999,900	11.9
2004	408,407,000	39,965,738	389,910,299	10.2
2005	423,323,000	37,890,179	394,850,846	9.6
2006	436,780,000	37,797,601	382.451,000	9.99
2007	455,118,000	38,815,838	371,387,500	10.49
2008	475,739,000	39,262,098	384,735,900	10.32
2009	451,879,000	40,582,915	372,303,000	10.56
2010	452,791,000	36,909,924	373,315,000	9.53
2011	464,037,000	36,429,400	389,813,400	9.34
2012	466,434,000	36,355,100	399,593,700	9.09

Figure 8-1: Ridership 2003 - 2012

Commuter Rail Ridership, Six Major Systems, 2003-2012

	National	LIRR	Metro North	NJT	Metra	MBTA CR	SEPTA
2003	406,802,000	98,465,000	72,573,300	60,392,000	68,085,100	40,612,172	27,952,500
2004	408,407,000	96,991,000	72,260,900	63,584,500	67,112,000	39,965,738	28,321,300
2005	423,323,000	98,064,000	74,272,200	66,913,500	69,777,100	37,890,190	29,852,300
2006	436,780,000	98,753,000	76,532,600	70,953,000	72,066,700	37,797,601	30,922,600
2007	455,118,000	100,368,000	79,724,700	74,854,500	75,099,600	38,815,838	33,360,400
2008	475,739,000	103,215,100	82,948,700	77,527,600	77,166,900	39,262,098	36,167,700
2009	451,879,000	96,744,000	79,469,700	73,781,400	71,522,200	40,582,915	34,618,800
2010	452,791,000	95,011,000	80,679,600	72,684,700	70,494,100	36,909,924	34,912,800
2011	464,037,000	98,630,000	81,830,100	78,611,800	72,166,500	36,429,400	35,709,200
2012	466,434,000	95,037,000	82,815,100	79,229,400	73,251,800	36,355,100	35,405,200
	up 14.7%	**down 3.5%**	**up 14.1%**	**up 31.2%**	**up 7.5%**	**down 10.5%**	**up 26.6%**

Figure 8-2: Ridership of Six Major Commuter Rail Systems in the U.S.

Even the most recent ridership statistics, published by APTA for the first quarter of 2013, show that the ridership in the system continues to decline. The MBTA first quarter 2012-first quarter 2013 comparison indicates a further 5.1% decline in commuter rail ridership, with the average weekday ridership now at 127,500. Nationally, overall commuter rail ridership also suffered an unexpected decline, but only 0.82%.

Clearly these statistics are indicative of a commuter rail system where a great deal more needs to be done to enable the service to provide the maximum benefit to the region and the people that it serves. Even though tracks have been upgraded, new equipment has been acquired and new services have opened up with new stations and parking lots, people are still not riding the MBTA's trains.

Our Approach

Keolis is a worldwide leader in providing public transportation services under contract to public agencies. Known for safety, quality, customer service, cost effectiveness and responsiveness to those agencies, Keolis, in 2012, employed over 56,000 employees and carried in excess of 2.2 billion passengers in 13 countries. The services provided included all modes of public transportation, e.g., commuter rail, subway, light rail, bus, water transportation, etc. A focus of the group is operating fully integrated transportation networks, such as in Lyon, France's second largest city, where the entire urban network is operated by Keolis. All services are fully integrated to assure the maximum in connectivity and passenger convenience. 2012 revenues for the group totaled over $6 billion.

SNCF (Societe Nationale des Chemins de fer Francais), the French national railway, is a 70% shareholder in Keolis. SNCF employs over 180,000 people in 120 countries worldwide. In France, SNCF operates a rail network of more than 20,000 miles and carries almost 1.5 billion passengers a year, including over 100 million on the heralded TGV high speed rail service, which operates on nearly 1200 miles of the SNCF network and reaches a maximum speed in excess of 200 MPH. The TGV service has achieved a remarkable safety record: in over 30 years of operation, this service has never experienced a fatal accident. SNCF's annual revenues exceed $42 billlion.

Keolis and SNCF comprise one single company with one single line of communications. We will

keep this contract in house for accountability and empowerment purposes. We are a public transportation company. Providing public transportation services—in all modes in over a dozen countries under contract to a public agency—is all that we do, all that we have ever done. As part of growing our business, we have learned how to work closely in partnership with the agencies that hire us to improve service and increase ridership—on a sustained, continuous basis.

Keolis and SNCF are one *single* company with one *single* line of communications. We have decided to keep this proposal in house for accountability and empowerment purposes. We are a public transportation company. Providing public transportation services—in all modes in over a dozen countries—under contract to a public agency is all that we do, all that we have ever done. As part of growing our business, we have learned how to work closely in partnership with the agencies that hire us to improve service and increase ridership—on a sustained, continuous basis.

This simple fact drives a fundamental principle guiding our efforts: We will work together with the MBTA, in close partnership, to produce a very different result over the next 12 years, an outcome which will feature prominently improved on-time performance, better customer service, more attractive train schedules and increased ridership — all achieved while improving productivity and cost efficiency throughout the system, through better planning, management and asset utilization.

How will we accomplish this? What is our vision for the MBTA Service? Together, all these initiatives, innovations and additional applied resources will be essential elements comprising and defining our vision for the MBTA Service: continuously **Moving Further Together** with the MBTA. There are two principal components to this vision:

- **Moving Further:** We will be in constant motion, never standing still until we achieve the ambitious performance and customer service targets we have set for the Service. One of Keolis's hallmarks is seeking continuous improvement in all our operations. We will keep on moving to improve on-time performance, customer service and all aspects of the service, throughout the life of the contract.
- **Together:** We will work as a team, to achieve our common goals of improved performance and customer service, investing in an unprecedented amount of training to upgrade the skills and capacities of the workforce. Our managers will embody this vision and will change the culture of the organization to be performance-focused and customer-focused. Our philosophy is based on working in partnership with the MBTA to ensure that we share all information on the operation of the Service, and implement initiatives which are fully aligned with the MBTA's goals and objectives. It also means building a positive relationship with trade unions and other stakeholders, such as our subcontractors, local communities and passenger groups.

Our vision for **Moving Further Together** will support and reinforce everything we do as part of the operation and maintenance of the MBTA Service. In addition to this, we will base our day-to-day operation of the service on the Keolis core philosophy of **Think Like a Passenger**. This means that all activities and initiatives implemented in the MBTA Service are assessed against the needs and expectations of our passengers and work towards achieving customer satisfaction.

Starting at the top of the organization and extending to every employee in the commuter rail workforce, we will implement this philosophy as part of the **cultural change program** that we are offering. Our management team will lead the transformation of the current organizational culture into one that is performance and customer-focused. Along with the multi-faceted series of safety programs and safety initiatives described in Section 2 Safety Plan, this customer-focused culture will be the hallmark of our operation of the MBTA Service. The **cultural**

change program will be based on customer focus and performance, which are the core values of Keolis and SNCF, driven by an ongoing program of **change management**.

In our experience, change management starts with the management team, who will be trained, motivated and guided by these core values through a never-ending process of safety, service improvement, attention to detail and helping every employee under their jurisdiction to become a contributing part of the overall success story.

Our Management Plan introduces the organizational structure we have chosen to ensure that every member of the organization is entirely focused on on-time performance, customer service, increased ridership and cost control to ensure maximum efficiency and to create value for the MBTA. We have reinforced certain areas of the organization which are critical to providing quality commuter rail service, including Safety, Security, Customer Service and Quality, and have introduced the new roles of Deputy General Manager, Chief Information Officer and Director - Quality and Environmental Services, to strengthen the leadership and focus on performance and customer satisfaction.

The Management Plan presents the team of qualified, experienced and customer-focused managers we have chosen to realize our vision of **Moving Further Together** with the MBTA. This diverse group of individuals will add value to the MBTA Service, not only because they can draw from each other's experience in operating rail services similar in size and complexity to the MBTA Service, but also because they share the same vision for the manner in which contract passenger rail operations must be provided, and they have the ability to lead the change within the organization to a customer-focused culture. The key managers we have selected are committed to fulfilling the MBTA's objectives and are dedicated to:

- Ensuring full compliance with all contractual requirements
- Providing the MBTA with all required information related to the operation, maintenance, compliance and costs of operating the MBTA Service
- Working cooperatively and harmoniously with the MBTA to integrate new technologies and industry practices to improve system safety, cost effectiveness and performance
- Bringing an effective staffing plan, labor structure and workforce training programs to the MBTA Service
- Elevating the importance of safety, security, quality and customer service, with each function represented by a senior-level manager reporting directly to the GM and able to assure that the importance of their duties and responsibilities to overall service performance and customer satisfaction is never overlooked
- Establishing and enforcing consistent training and service standards
- Increasing management presence throughout the system on an everyday basis. We see our managers and our unionized workforce as one entity, and we do not believe that a commuter rail service can or should be managed from an office. Our managers will be out on the trains, with our workers in the field and with our customers, seeing the service from their perspective every day
- Implementing ambitious programs to improve productivity and add value to the Service

In our experience, changing the culture of an organization requires a clear distinction between the past and the future. In order to start **Moving Further Together** on the MBTA Service, our new senior management team will bring a "management shock" to the company, energizing employees to implement the cultural change we are seeking. Our leadership team has the skills and the experience, and is supported by the entire Keolis Group, to manage this cultural change.

In order to ensure that the cultural change we are proposing is sustainable and that the organization is committed to continuously improving our performance and customer satisfaction results, we will focus our employee and labor relations efforts on:

- Improving employee engagement and motivation
- Building managers' skills and leadership abilities
- Working in partnership with the unions

Our employee and labor relations programs and initiatives, which will support the change to a sustainable performance and customer-focused culture on the MBTA Service, are described in this Management Plan. We have a proven ability to work in harmony with the unions representing our employees and to provide a workplace environment that allows them to perform their jobs, fulfill their responsibilities and feel a sense of accomplishment in achieving our objectives and their objectives together.

Our vision of **Moving Further Together,** reinforced and strengthened by a culture in which each of our employees is expected to **Think Like a Passenger,** will be accomplished through the specific Plans described in our proposal. The Plans will govern our operation and maintenance of the MBTA Service. Each Plan contains a series of commitments which we are making to the MBTA to work together in a transparent partnership. We will establish a strong working relationship in which:

- The best resources of KCS and the MBTA are fully and seamlessly committed to a program of total safety and continuous improvement in the MBTA Service
- All of the personnel dedicated to the Service — managers and employees alike — are trained and provided with the resources to fulfill the duties and responsibilities of their positions, and to take satisfaction in their work because they know that they are part of an important public service that is truly appreciated by an ever-increasing customer base
- We work ceaselessly to provide the service in a more cost-effective manner, implementing and achieving an on-going series of productivity increases based on improved training and motivation of our workforce and better asset utilization and preservation throughout the life of the contract, with the result that the MBTA and the passengers alike benefit from our total commitment to a "**value for money**" approach for the MBTA Service
- The MBTA has instant access to all the service-related information it needs to develop the policies and programs necessary to achieve genuine progress and growth
- The trends of the last 10 years are reversed, and the MBTA Service experiences sustained ridership growth on a year-after-year basis
- The service is transformed from a Boston-based commuter rail service into a five-state regional rail network

As discussed in more detail in the corresponding Plans, specific programs and initiatives which we will implement to attain all of the above objectives include:

SAFETY — All of our operating personnel will be required to develop — and adhere to — individual safety plans that will promote safer working practices and a safer, more pleasant on-train environment for our passengers. We will achieve significant reductions in passenger and employee injuries and accidents/incidents beginning in the first year of our operation of the Service. Our safety programs will be led by a manager who is an acknowledged industry leader in this field. He will be assisted in the development of a true safety culture in the MBTA Service by both the comprehensive corporate safety culture and policies that are hallmarks of every passenger rail service worldwide and by the extensive rail safety expertise of Arthur D. Little.

SECURITY, EMERGENCY PREPAREDNESS AND EMERGENCY RESPONSE, AND REGULATORY COMPLIANCE — Our security plans and programs will be closely coordinated and integrated with the MBTA Police Department, which has primary responsibility for the security of the entire MBTA transportation network. Each of our employees will be trained for and will fulfill his/her role in keeping the MBTA Service as secure as possible. These activities will be led by a former MBTA Deputy Chief of Police, who also served as the head of rail security for the

Department of Homeland Security for the New England Region.

MECHANICAL SERVICES — Calling on the resources of both Keolis and SNCF, we will establish formal maintenance programs and processes, including lifecycle maintenance teams, new management processes, ISO 9001 standards and rigorous maintenance scheduling, to assure that the MBTA's extensive—and expensive—fleet of locomotives and coaches is properly and consistently maintained, pursuant to FRA requirements, our maintenance standards, the MBTA's maintenance standards and any other prevailing industry and/or regulatory requirements. This will lead to improved equipment performance, reliability, availability, overall condition and cleanliness of each unit.

We will also perform more equipment maintenance on the South lines, reducing the number of costly, time-consuming trips that locomotives and coaches have to make to the North for various maintenance events, and we will introduce the Lean Management program to govern all of our equipment maintenance activities. The equipment fleet will become one of our primary marketing tools in the continuous campaign to improve the Service and increase its ridership.

ENGINEERING SERVICES — We will employ the extensive resources of SNCF to establish an Engineering Services Plan, and our Engineering Department will be better organized, will provide more resources for its workforce and will do a greatly improved job of scheduling its activities, thus reducing the impact of engineering work on train service and supporting our goals of higher levels of on-time performance and increased customer satisfaction.

On the construction support side, every element of the MBTA's Capital Improvement Plan (CIP) will be fully supported by our project resources. In addition, to the extent the MBTA wishes, we will be happy to participate in the planning process for the CIP, as well as for scheduling and performing, promptly and cost-effectively, the ensuing work.

Our management team will be assisted in this effort by team members HNTB, which is heavily involved in two major projects on the commuter rail system (the upgrading of the Fitchburg Line and the expansion of South Station), and by Keville Enterprises, which has been managing and supporting construction and improvement projects on the system for decades. These two very experienced team members will focus on design (if required), project scheduling and staging, project management, day-to-day construction management, schedule and budget adherence and contract compliance, including recordkeeping and reporting. The entire team will be focused on being as transparent in our management and conduct of special projects and supplemental work as we are in the daily operation and maintenance of the Service.

TRANSPORTATION SERVICES — A significantly larger number of operationally qualified Transportation managers will maintain a constant presence in the MBTA Service and on the trains — coaching, counseling, testing, training and providing leadership to our engineers and conductors in the areas of train operations, revenue protection and ticket verification and customer service. We will introduce powerful analytical tools and programs into the service to improve on-time performance and to allow for better, more detailed delay analysis, more efficient scheduling of equipment and crews and the development of improved train schedules, including the introduction of true express service, for the MBTA's consideration. We will also provide clean uniforms, every week, and deploy our simulator in Boston, *at our own cost – a $680k savings for the MBTA.*

CUSTOMER SERVICE — Think Like a Passenger will be evident in every aspect of our customer service program. We will develop and implement comprehensive plans to respond to every one of the areas of customer service where we believe that the MBTA Service can be improved, including, but not limited to:

- Creating a more involved and more effective customer service function by making our

managers visible on trains and at stations, allowing them to interact with customers and be proactive in seeking feedback
- Identifying early initiatives which will start to transform the customers' impressions, such as uniforms, training, cleanliness and service provision
- Proactively improving the provision of customer information, including management of delays and disruptions
- Forging a new relationship with customers by being a better "listening organization" and focusing on relationship-building between managers, staff and customers, in particular in handling customer complaints
- Establishing levels of customer satisfaction and setting targets for improvement
- Using new technology
- Efficiently monitoring our results, in order to manage and continuously improve the service
- In close cooperation with the MBTA, aggressively pursuing continuous service improvement and growth / expansion opportunities, such as the regional passenger rail concept mentioned later in this Executive Summary

MANAGEMENT — A highly-skilled team of nationally and internationally experienced managers will lead our operation and maintenance of the MBTA Service and will be responsible for:

- Improving every aspect of the MBTA Service and increasing ridership
- Enhancing management training, qualifications and development
- Expanding employee training and proficiency
- Maintaining a transparent, responsive relationship with the MBTA
- Achieving total contractual and regulatory compliance
- Delivering a daily service that demonstrates safety, quality, performance and best practices on every train, every day

These key managers will bring a fresh perspective, an awareness of and familiarity with best practices in providing commuter rail services, both nationally and internationally, and a determination to employ every resource and every asset, both human and material, in the safest, most cost-effective and efficient manner that will contribute to service quality and performance.

Based on our interpretation of the RFP, we have also chosen to include the Training, Quality, Environmental and Materials Management sections of our proposal in the Management Plan. In each of these important service areas, we will bring a different approach to the way things have traditionally been done in the MBTA Service. Examples of our new approach include the following:

- **Training:** After carefully considering an investment in expanded training facilities on our part, we concluded that the real estate investment in such a program would primarily benefit KCS, a private sector company. Consequently, we have determined that the better choice for the MBTA would be to involve elements of the community in our training program. By doing so, the training team that we are proposing for the MBTA Service will be more local, more diverse and more a part of the community that we will be serving. This is an extremely important concept to us.

  Accordingly, we have executed Letters of Intent with Bunker Hill Community College, Roxbury Community College and FM&M / Work, Inc., an AbilityOne organization dedicated to serving the disabled community. We will use their training facilities and their expertise in developing, implementing and providing to our employees training of a higher caliber than has been available in past years. One of our objectives for this program — and one for which we have already established a training budget — is to assist our employees in advancing their careers through educational opportunities, for example, by participating in a program designed to grant an Associate's Degree and a Conductor's Certification simultaneously. Last but not least, in order to integrate and standardize our training programs with other

MBTA modes of transportation, these newly developed programs will be open to MBTA employees, as part of the slots which we will make available to all MBTA employees in all our training programs.

- **Quality:** We have elevated the required Manager - Quality position to Director - Quality and Environmental Services, based on advice received from our internationally renowned quality consultants, Bureau Veritas, whom we have engaged to assist us in the development of a comprehensive quality management program that exceeds the requirements of the RFP. The position of Director - Quality and Environmental Services will be kept in-house to ensure empowerment and accountability. While the Director - Quality and Environmental Services will report to the General Manager on a daily basis, the Director will also be accountable to the Steering Committee for the Quality Team's effort to ensure neutrality and objectivity. Under this department head's direction and with the help of Quality Assurance Representatives (QARs) in various departments, we will achieve company-wide ISO certification.
- **Environmental Services:** The Director - Quality and Environmental Services will also be responsible for managing and monitoring the work of our environmental services DBE subcontractor, who will provide the specialized technical services necessary for the upkeep of the environmental systems throughout the MBTA Service. We will also employ, where required, additional environmental firms to assure that the level of expertise applied to each environmental maintenance/servicing task is the highest attainable.

  Please note that our commitment starts with the submission of this proposal which has been printed on environmentally responsible paper.
- **Materials Management:** In order to assure the integrity of the process and freedom from influence, Materials Management will report to the Director - Finance, Accounting and Administration and will develop and implement a centralized stores and inventory system with proper asset management and inventory control. In this way, all of the physical assets required to provide the MBTA Service will be consolidated into a single system, with centralized management, accurate recordkeeping and full accountability. We will create and maintain standardized, consolidated asset registers and develop standard procurement processes and policies for the entire organization. This will enable KCS and the MBTA to have, at all times, full knowledge of the value, extent and condition of the materials inventory supporting the maintenance of the commuter rail fleet and infrastructure.

INFORMATION TECHNOLOGY — Our IT team will be dedicated to delivering high-quality service across the entire IT environment. We will implement and manage an effective Issue Tracking Portal to facilitate the identification, tracking and escalation of issues through resolution. It will also measure our effectiveness in running all systems against Service Level Agreements.

This team will develop a long-term, consistent vision for the MBTA Commuter Rail IT environment, taking into account the use and maintenance of legacy systems and innovation opportunities that our group will detect. Our priority, consistent with our mandate to always **Think Like a Passenger**, will be to develop new system offerings and enhanced services for our customers. A consistent architecture vision will help to rationalize and integrate all these systems.

We will introduce a new IT Spend Analysis method to validate each investment to ensure the highest value for the lowest cost. For all new expenses, we will establish governance to be sure the expenses are required and justified, and that the solution chosen delivers the best quality/cost ratio.

As part of our commitment to **Moving Further Together** in all transparency, we will give the MBTA access to all data with the ability to generate reports through a cloud based ITP. Data access to the MBTA will be allowed through the

ITP to all systems, both cloud based and those located in the Commuter Rail IT Environment. The MBTA will designate individuals who will be authorized to enter the system and system authorization settings will be configured to allow actions appropriate to each individual That way, the data will be available not only at the MBTA's request, but at the MBTA's discretion. Our IT staff will be dedicated to maintaining a high level of performance, creating and implementing the IT vision, and supporting the different stakeholders (external, starting with passengers, and internal, including all members of the MBTA and staff affected by a project) in understanding and using the new tools and services created to support their operations.

DBE PARTICIPATION — We will exceed the MBTA's targets for DBE participation in this contract, and we commit to maintaining those levels of DBE participation throughout the term of the contract. We expect, further, that the scope of services involved in providing the MBTA Service will evolve and change over time, producing new, meaningful areas where DBE subcontractors can be utilized and can make an even more important contribution to service delivery than is the case at present.

We will, in fact, encourage subcontracting, mentoring and partnering opportunities with DBEs throughout the term of the contract. As part of this commitment, we have met with Michelle N. Morin and Reginald A. Nunnally of the MassDOT Supplier Diversity Office (SDO), who responded positively to our offer to involve SDO in our compliance efforts and to use their expertise to assist in achieving higher levels of DBE participation in the MBTA Service.

We are also already assisting deserving firms, such as FM & M, to qualify as DBEs, pursuant to the passage of legislation which would allow this to happen. FM & M, a wholly-owned subsidiary of Work, Inc., has a workforce of several hundred members, all from the disabled community, and gives 100% of its profits to that community.

EQUAL EMPLOYMENT OPPORTUNITY AND DIVERSITY — The Virginia Railway Express (VRE) service, which is operated by Keolis, has a very diverse commuter rail workforce. Forty-five percent (45%) of our VRE employees are African-American, and twenty percent (20%) are women. We commit to providing EEO for all, and we will use our proven best-practice initiatives to increase the diversity of the commuter rail workforce. In this way, over time our workforce will more closely reflect the community it serves.

To support and accelerate this effort, we have already established contact with various organizations, including, but not limited to community colleges such as Bunker Hill Community College and Roxbury Community College. Each of these institutions has signed a Letter of Intent to assist us in a variety of ways, including recruiting candidates for vacancies in our workforce.

We have also met with Gretchen E. Manning, Deputy Director of Massachusetts Community Colleges, who has kindly offered her support and who is arranging for us to meet with representatives from other community colleges, beginning in August. The purpose of this meeting is to develop specific training initiatives and to create synergies between the MBTA Service and several community colleges, which we believe will serve to significantly increase equal employment opportunities for prospective employees. Consistent with the requirements of the RFP, we will make up to 10% of the slots for any such training programs available to employees of the MBTA. It is our hope that MBTA employees working in the other modes of transportation will want to participate in these programs and, by doing so, help to more fully integrate policies and practices in the MBTA Service with the rest of the MBTA network — for example, in the areas of customer service and on-train announcements.

MOBILIZATION — An experienced team of mobilization experts, several of whom were extensively involved in the successful MBTA Service transition in 2003, will be responsible for this six-month effort and the safe, seamless transition of the service to KCS operation and maintenance on July 1, 2014. They will also be

responsible for keeping the MBTA fully informed and involved in this transition, from Notice to Proceed (NPT) to the Agreement Services Commencement Date. Mobilization activities will start immediately upon NTP and will feature the early engagement of the workforce, whose members will become our employees, and their labor organizations. We will keep them as fully informed as possible throughout the transition period to lessen any anxiety and/or concern about pending change that may develop. We will also begin a community outreach program in the commuter service area, with a focus on the Regional Transportation Authorities that contract with the MBTA for the service in their communities, so they will know that their service will be in good hands after the transition.

Finally, we will focus on the comprehensive list of ODRLs contained in the RFP, producing detailed, high-quality, and technically sound contract deliverable documentation that will enable the MBTA to be fully involved in and knowledgeable of our operation and maintenance of your service.

REBRANDING THE MBTA SERVICE

In prior years, the MBTA was responsible for commuter rail service just in the immediate Boston area. Over the past several years, that service has expanded into Central Massachusetts, well beyond Providence and deep into Central Rhode Island, and it is within just a few rail miles of New Hampshire on three separate lines. Continued expansion efforts of the type that have proven very successful in the recent past could, conceivably, bring the Boston commuter rail service into Western Massachusetts, New Hampshire, and Maine (through a cooperative effort with the Downeaster Service). It potentially could extend even into Connecticut, where a link to the Connecticut DOT-sponsored Shore Line East service, just over 40 miles from the present service terminus at Wickford Junction, RI, would produce uninterrupted commuter rail service stretching from Boston to New York City.

Developing this service on a truly regional basis, moreover, would give the MBTA the opportunity, if desired, to create a service brand, one where the name of the contract operator would not appear and there would no longer be a need for a different name or a different logo on the MBTA's timetable and/or other promotional/ informational materials with every change in operator. A local example of this would be the Downeaster Service, where the service area, rather than an agency or an operator, provides the service identity. The MBTA Service, expanded to all of Eastern New England, could become, for example, New England Regional Rail.

Far-fetched? We don't believe so. Possible? Yes, if the MBTA can be assured that its commuter rail operator is doing everything possible to:

- Provide a safe, high-quality, cost-effective service capable of realizing and sustaining significant ridership growth and
- Repeatedly create the demand for more service, which will, at the same time, create demand for additional geographical service expansions.

A significant part of the effort in many of our contract commuter rail services involves the commercial aspects of the service. We take revenue risk, so we have to sell tickets or we may lose money. Therefore, we have to be proficient in marketing the services which we operate. This considerable expertise will be available to the MBTA on a shared-cost basis if we are your commuter rail operator. We will dedicate our resources — in concert with yours — to developing a rebranding campaign, such as the one described above, for your service.

We believe that opportunities like this — a new, broader, more exciting identity created at a greatly reduced cost-await the MBTA and its commuter rail service, a transformation into a five-state New England Regional Rail Service that could occur before the end of the next contract. Our immediate priority will be to focus on the present and provide service to the highest possible standards of safety, reliability, customer service and quality. But we will also work closely with you to increase ridership and to increase demand, both in Eastern Massachusetts and in whatever other areas of New England make

sense for expansion. At the same time, we will work tirelessly with you, side by side and in true partnership, to realize this future.

II. The MBTA's Needs as We Understand Them

We understand that the MBTA's objectives for the Commuter Rail Service are focused around the following main areas:

The MBTA's Objectives	Our Approach
To identify Proposers with a Boston-based organizational structure and personnel who will ensure **full compliance with all contract requirements**	Keolis has unparalleled experience and a solid record of performance providing contract passenger rail services to public agencies around the world. It is all that we do. We understand how to comply with and fulfill the requirements of an operating agreement for commuter rail services. We also understand the needs of public sector policy makers — and how to always be in a position to respond to those needs. Furthermore, all of our experience and qualifications in providing contract passenger rail services involve multi-contractor/multi-user operating environments, including working closely in Virginia with both Amtrak and CSXT on an every-day/every-train basis. Specifically, we will: • Implement the programs and initiatives in the areas of safety, on-time performance and service reliability, customer service and continuous improvement in such a ways as to ensure that we comply with all contract requirements. These programs and initiatives are discussed in detail in their respective Plans • Dedicate to the MBTA Service a high-quality senior management team which is fully aware of all contract requirements and commits to complying with every aspect of them • Implement a performance and customer-focused culture through leadership, management and training, which will enable us to comply with and exceed the customer service requirements of the contract • Implement a strong Quality Plan that includes performance monitoring and enhancement of quality at all levels of the organization • Promote greater personal responsibility and accountability among our employees, to improve their engagement and motivation to continuously improve the Service • Regularly monitor and audit our compliance with the Contract requirements through our corporate governance structure • Build a strong partnership with the MBTA to ensure that we are continuously **Moving Further Together** • Involve community colleges in our training programs when possible, and benefit from shared facilities • Deploy our own innovations and best practices, such as our simulator — at a $680K savings for the MBTA

The MBTA's Objectives	Our Approach
To identify Proposers with a Boston-based organizational structure and personnel who will ensure the **cost effective provision of all Commuter Rail Services**	We have outlined how we will provide the MBTA Service on a cost-effective basis throughout this proposal. The Transportation Plan describes how we will optimize crew runs to cut overtime payments. Our initiatives in Maintenance of Way will allow us to make productivity savings by introducing better work organization and improving front-line management. Our Maintenance of Equipment team will improve the cost-effective provision of maintenance activities by introducing ISO 9001, a new way of planning maintenance actions, and lean management. Both of these departments will be supported in their efforts by an enhanced, improved Materials Management system we will implement. Overall, all these efforts will be reinforced by increased training for employees and a stronger, better trained, more qualified management team. In summary, we will: • Implement a consistent, thorough, visible management program, which focuses on safety, performance, partnership with the MBTA, cost-effectiveness and effective asset utilization/preservation • Manage the business by monitoring a set of operational, financial and organizational key performance indicators, which will allow us to identify trends early and implement action plans accordingly • Improve managers' skills and leadership abilities to allow them to manage change as necessary, constantly seek possibilities for cost-effective improvements to the service and motivate our staff to go the extra mile • Improve the performance and customer satisfaction levels of the service, by implementing a performance-focused and customer-focused culture through proper leadership, management and training • Implement a comprehensive Quality Plan that includes performance monitoring and enhancement of quality at all levels of the organization
To identify Proposers with a Boston-based organizational structure and personnel committed to providing the MBTA with all required information related to the operation, maintenance, compliance and costs of operating commuter rail service	All service-related records will be maintained in our administrative offices in Boston and will be accessible to the MBTA at all times. We commit to providing the MBTA with all necessary information concerning the operation, maintenance, compliance and costs of operating the service. Local record keeping will be the basis of achieving this transparency. In addition to this, our General Manager will be the main contact person for the MBTA. He will be available to answer any questions, supply any requested information and support the MBTA in any way possible. He will be only a phone call away and during Mobilization we will schedule face-to-face meetings between our General Manager and the MBTA. Information will also be forthcoming at the level of our General Manager's direct reports. He will ensure that the lines of communication between KCS and the MBTA are open in every department. Specifically, we will: • Develop and implement a state-of-the-art IT system consistent and compliant with the requirements of the RFP in every detail • Utilize the outputs of the IT system not just as reporting tools, but as management tools, applying the information developed to improve the service in every aspect • Assure the availability of information available to us through the IT system to the MBTA — promptly, accurately and completely • Use the IT system jointly with the MBTA as a vehicle for **Moving Further Together** and provide access to all data through a cloud-based ITP

The MBTA's Objectives	Our Approach
To identify Proposers with a demonstrated capability to work cooperatively with the MBTA to integrate new technologies and industry practices to improve overall system safety, cost effectiveness and performance	The success of our operation of your service depends on keeping the lines of communication between the MBTA, our General Manager and our entire management team and workforce constantly open and frequently used to share perspectives and problems. Each one of our employees will know what we are doing, why we are doing it and who we are doing it for. You have our firm commitment to the principle of transparency in every aspect of our provision of your Service. Specifically, we will: • Dedicate to the MBTA Service a key management team which brings experience from a variety of railroad services and is committed to working cooperatively with the MBTA to achieve continuous improvement • Completely align our objectives for the service with those of the MBTA, to ensure that we are working to achieve the same goals — for example. by making our General Manager and our board members available to meet with MBTA representatives whenever requested • Continuously monitor and remain aware of Keolis and industry-wide best practices, and share ideas with the MBTA, for integrating new technologies and industry practices to improve overall system safety, cost effectiveness and performance at the MBTA Service • Support the MBTA's objectives by introducing a performance-focused and customer-focused culture through proper leadership, management and training, which will encourage each employee to **Think Like a Passenger** and continuously improve their work • Implement a comprehensive Quality Plan that includes performance monitoring and quality enhancement at all levels of the organization, to enable us to identify new technologies and industry practices which can be implemented in Boston • Give the MBTA access to all data with the ability to generate reports through a cloud-based ITP
To identify Proposers with an effective staffing plan, labor structure, and workforce training	Keolis is well known for implementing effective staffing plans, labor structures and workforce training programs in all the services it operates. We have positive working relationships with the unions in all our services. Beyond this, we do not believe that a commuter rail service can be effectively managed only from an office. Service excellence requires the presence of all managers on the trains, interfacing with customers and our employees alike, and using the information gained in this process to advance service quality and improvement. Specifically, we will: • Assure the availability of sufficient numbers of trained, qualified, certified staff in all commuter rail disciplines at all times • Acquire and use innovative training tools and methodologies, such as a locomotive simulator • Ensure that our employees have career development and advancement opportunities within the organization and receive the necessary training and support to lead them to success • Implement a mandatory program of train riding for management, which is discussed in more detail in Section 6 Transportation Services Plan • Partner with community colleges to provide standardized training programs, when possible • Ensure that the community benefits from our training programs

III. Our Assessment of the Current Situation

We have spent a considerable amount of time during the proposal process assessing the current situation of the MBTA Service. Our team has used the service, held Customer Service Focus Groups to investigate the views of existing and potential passengers, participated fully in the Pre-Proposal Property Condition Assessment which the MBTA arranged for Proposers, and met with representatives of all unions. These activities have revealed:

- A falling ridership trend over the last 10 years, which may have weakened employee motivation and enthusiasm for the service. Staff morale and motivation are prerequisites to ensuring employees go the extra mile to assist and satisfy our customers. In our experience, services experiencing falling ridership, as is the case with the MBTA Service, often also experience lowered employee motivation, and a lack of consistent focus and emphasis on customer service.
- A lack of **involvement and responsibility** for employees and managers. In our discussions with the unions, we have found that employees in the field are very competent and capable of doing their jobs, but have not been asked to be active participants in the success of the service. At the same time, managers often have not been asked to play leadership roles and take responsibility not only for the success of the service, but also for its growth.
- A lack of **partnership** between the contract operator and the MBTA. It has been too difficult for the MBTA to provide essential service documentation and records that should have been provided by the operator on a consistent basis throughout the life of the current contract. It appears to us that the relationship between agency and operator isn't nearly transparent enough for the requirements of the agency in its oversight role as funding entity and policy maker for the Service.

Correcting these issues will be the responsibility of our management team, led by the General Manager (GM). Primary among their responsibilities will be assuring that all of our employees engaged in the provision of the MBTA Service are trained, qualified, certified and motivated to perform their jobs through focusing on safety, customer service, performance, quality and transparency.

IV. The Results We Will Deliver

We will deliver the following results as part of the management of this contract, to ensure we achieve our performance and customer service goals, which are fully aligned with the MBTA's stated objectives:

- Implement and cascade our vision of **Moving Further Together** with the MBTA, to bring energy and new ideas to the MBTA Service
- Bring new leadership skills to the organization, which will affect a "management shock" and enable us to instill the performance-focused and customer-focused culture we are seeking among all employees
- Give the MBTA Service the benefit of exchanging best practices with other, similarly-sized operations and networks around the world, as part of Keolis Group's wealth of expertise
- Invest in the skills and training of the employees who make up the MBTA Service, to ensure that they are able and motivated to serve the MBTA's customers in the best possible way
- Use new management tools and techniques to ensure that the change to a performance and customer-focused culture is sustainable and that we work toward continuous improvement in all aspects of the operation and maintenance of the MBTA Service

In order to achieve these results, we will leverage our dedicated **management team,** our **employee and labor relations processes** and our **business management processes**, including for materials management and procurement, quality, environmental services and financial reporting. These levers will allow us to provide high-quality, cost-effective and customer-focused service to the MBTA and our passengers.

Dedicated Management Team for the MBTA Service

The most important lever we will use to achieve these results is our local management team, which is made up of a group of diverse individuals who have invaluable experience in managing passenger rail services from all over the world, on systems similar in size and complexity to the MBTA's Service. This team is focused on supporting our GM, who holds the ultimate responsibility for providing safety, performance, customer service, quality and transparency to the MBTA and its customers. They fully subscribe to our vision for **Moving Further Together** with the MBTA, and they are fully empowered to make any decision necessary to accomplish our goals and fulfill the MBTA's objectives, outlined above.

Managing locally means that our GM must have all of the tools needed to operate the business close at hand. At all our operations, all of the day-to-day functions of the business are performed by local staff who are properly trained and assisted, if and when needed, by experts from Keolis and SNCF operations. This reliance upon our local management team to manage the MBTA Service is based on the way Keolis operates all the services it provides around the world. This philosophy allows us to ensure that our customers benefit from local solutions to local problems, combined with our experience of worldwide best practice in passenger transportation. We are also well-known for having stable management teams in our operations, because we believe in building long-term relationships with our clients. Our key managers are introduced in Section 8.B.

Employee and Labor Relations Processes

Our effective employee and labor relations processes promote the stability of our management teams and ensure we provide a safe, customer- and performance-focused commuter rail service while building a close, transparent working relationship with the MBTA. We always try to identify talent within the organization and groom future leaders. We promote our people internally to take on senior-level positions when their skills and experience match the position, leading to a high level of stability within our teams.

In addition, we will focus on improving employee engagement and motivation, increasing managers' skills and leadership abilities, and working in partnership with the unions. The programs and initiatives we are proposing for the effective management of employee and labor relations will allow us to ensure that each and every one of our employees **Think Like a Passenger**, thereby changing the culture of the organization to be performance-focused and customer-focused. This, in turn, will allow us to achieve the MBTA's objectives for the Service, as well as our targeted results, ensuring that we are continuously **Moving Further Together**. Our employee and labor relations initiatives are detailed in Section 8.C.

Business Management Processes

Finally, our approach to business management processes in areas such as materials management, quality, environmental services and financial and operational reporting ensures that the services we provide are both high-quality and cost-effective. In our opinion, if something is not measured, it is not managed, and we use our best-practice processes to ensure that our performance in all areas of the business is measured and reported on regularly. This enables us to identify problem areas early and implement corrective action plans to remedy the situation, and it is an important part of ensuring that we continuously improve our performance.

OUR MANAGEMENT PLAN

Our Management Plan outlines the organizational structure we will employ to provide safe, high-quality, reliable, customer-friendly and contractually compliant service to the MBTA and its passengers; presents the key managers we have selected for the service; and demonstrates our ability to provide effective employee and labor relations.

Our initiatives and best practices outlined below support our vision of **Moving Further Together** with the MBTA and follow Keolis' philosophy

of **Think Like a Passenger**. This ensures that all activities and initiatives are assessed against the needs and expectations of the MBTA and our passengers, and have customer satisfaction as their goal. We have applied this philosophy in designing the organization, in assembling our management team, and in defining the employee and labor strategy for the MBTA Service:

- The organizational structure we have chosen demonstrates our commitment to performance, quality and customer service
- Our key management team for the MBTA Service has been selected based not only on their experience in providing quality passenger rail service, but also on their ability to lead the culture change that we want to effect in the service, to make it performance-focused and customer-focused
- Our employee and labor relations strategy recognizes the fact that our staff is the heart and soul of the service we provide, ensures that they have all the skills and training they need to do their job, and provides the basis for working in partnership with the unions to achieve our goals

Starting at the top of the organization and extending to every employee in the commuter rail workforce, we will implement this philosophy as part of the cultural change that we are offering. Along with the multi-faceted series of safety programs and safety initiatives described in Section 2 Safety Plan , this will be the hallmark of our operation of the MBTA Service.

8.A. ORGANIZATIONAL CHART LISTING THE NAMES, REPORTING RELATIONSHIPS, TITLES AND GEOGRAPHIC LOCATION FOR THE IDENTIFIED KEY MANAGEMENT POSITIONS

The organizational structure we have chosen for the MBTA Service, described below, will allow us to deliver on our performance and customer service commitments. We will manage the MBTA Service through clear, concise lines of authority, unambiguous reporting relationships, minimal layers of management and responsibility tied to accountability. Our organizational structure is based on the following basic principles for organizational design:

- **Clear responsibilities:** Ensuring clarity of responsibilities will allow us to deliver consistent service and performance excellence. When staff know what their responsibilities are and who they are accountable to, they will be empowered to fulfill their role. The individual safety plans which we will require all staff to complete are an example of how we will clarify individual responsibilities. This initiative is detailed in Section 2 Safety Plan.
- **Communication and collaboration:** We will ensure that our staff know what we want to achieve at the MBTA Service and that we are working toward the same goal. Our chosen organization structure will enable communication and collaboration between teams and functions, which is a prerequisite to avoiding creating working "silos."
- **Efficiency and flexibility:** We will achieve staff efficiencies in several areas, by ensuring that roles are not duplicated and people are only part of the headcount when we have a role for them. Having dedicated resources to implement our change plans will be essential for successfully completing them, but we will not burden the organization with additional headcount, when changes are not occurring.

In addition to this, our organization will be focused on quality and continuous improvement. Beginning with the creation of the Director - Quality and Environmental Services position as a direct report to the GM, and traversing all departments and all functions in the service, our performance as your contract operator will be measured, evaluated and managed for continuous improvement, resulting in a better service, more attractive to existing customers and more capable of attracting growing numbers of passengers.

The organizational structure that we have chosen for the MBTA Service differs from the current organization in the following key aspects:

- Currently, the Deputy GM function is attached to the General Counsel position, which dilutes the importance of the Deputy GM's role. We have included a Deputy GM as a separate position, reporting directly to the GM, to reinforce the leadership of the organization and effect the transformation to a performance-focused and customer-focused culture within the organization. Our Deputy GM will have specific responsibility for the Transportation, Mechanical and Engineering Departments. Creating this position also reinforces our succession planning and ensures GM continuity in leadership. Working under the close tutelage of our GM, we will be able to prepare our next-generation GM to seamlessly take control of our operation of the MBTA Service at the appropriate time
- We have included a Director - Quality and Environmental Services to lead the implementation of a strong Quality Plan that includes performance monitoring and enhancement of quality at all levels of the organization
- We have introduced the position of Chief Information Officer to implement our proposed state-of-the-art IT system, which is consistent and compliant with the requirements of the RFP in every detail. This position will be key in allowing us to utilize the outputs of the IT system not just as reporting tools, but as management tools, applying the information developed to improve the service in every aspect. In addition, this role will assure the availability of the entire range of information available to us through a cloud-based IT system to the MBTA — promptly, accurately and completely
- We have eliminated the positions of Director of Strategic Planning and Chief of Staff from the current organization, which seem to have no direct reports and in our view add limited value to the organization
- In order to emphasize the importance of certain positions and safeguard the consistency of titles within the organization,

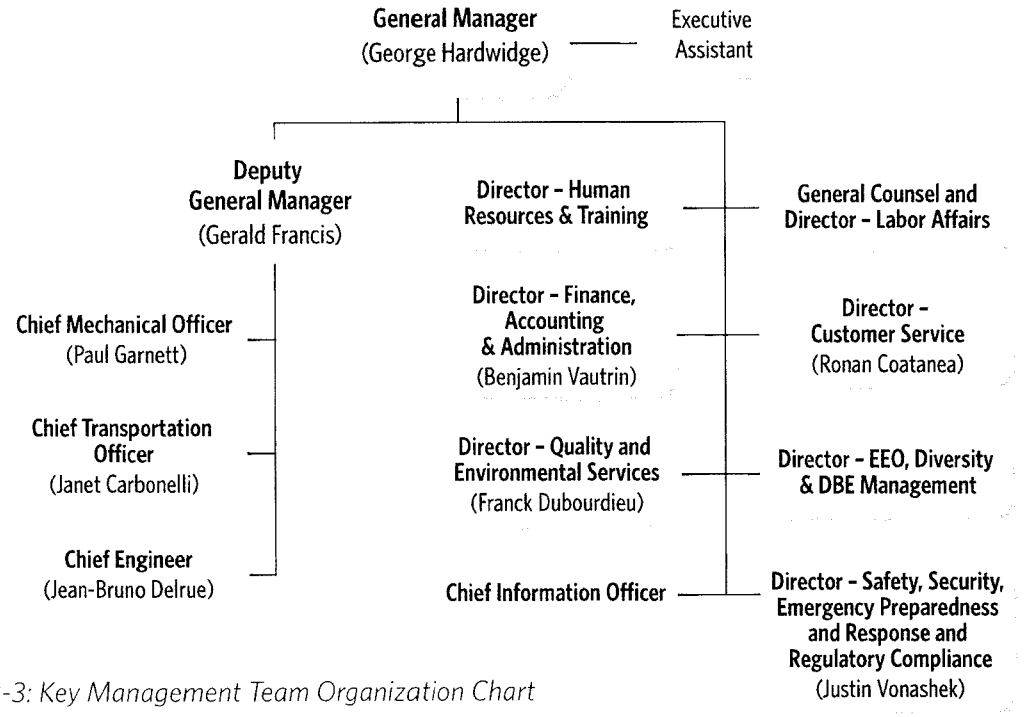


Figure 8-3: Key Management Team Organization Chart

we have elevated the Managers (as referred to in the RFP) to Directors

The organization chart providing the names and titles of our key management positions is shown below. All managers will be located in Boston, will report directly to the GM, and will be dedicated entirely to the MBTA Service.

Our key managers are highly experienced and motivated individuals who are committed to fulfilling the MBTA's objectives and satisfying its customers. They will be responsible for implementing our vision of **Moving Further Together** with the MBTA, as well as for creating the performance-focused and customer-focused culture we are proposing. In order to do so, they will:

- Improve employee engagement and motivation
- Develop managers' skills and leadership abilities
- Implement the initiatives outlined in this offer
- Provide exemplary leadership to the workforce
- Make all decisions necessary to fulfill these management commitments

This cultural change will benefit the MBTA and its customers throughout the life of the contract, through better customer service, the implementation of innovative initiatives and continuous improvements for the service, more transparency and a truly supportive partner. It will also have a positive impact on the local management and workforce, who will experience consistent messages and quality leadership. Our key managers and the responsibilities they will have within the organization are presented below.

A)1) Janet Carbonelli, Chief Transportation Officer

At Metra in Chicago, Ms. Carbonelli started as Yardmaster / Control Tower Operator and worked her way up to become Director of Operations in 2007. As such, she has been responsible for providing safe and on-time passage for 9.5 million passengers annually. She has been recognized for Metra's record of injury-free manpower hours for five successive quarters and for improving the Electric District's on-time performance from 95% to 97%. She has also implemented cost-saving measures to decrease Trainmen and Engineer labor expenses by approximately $200,000 annually. In addition, Ms. Carbonelli has specific experience coordinating special event service for events that had unique requirements in terms of hours of service and ridership.

Experience

Metra Chicago, IL	• Director of Operations, 2007-Present • Senior Trainmaster, 2005-2007 • Trainmaster, 1999-2005 • Train Dispatcher/Tower Operator, 1996-1999
Canadian Pacific Rail Bensenville, IL	• Yardmaster/Control Tower Operator, 1992-1996

Education

Southern Illinois University - B.S., Aviation/Transportation

As our Chief Transportation Officer, Ms. Carbonelli will:

- Establish and manage the daily MBTA Service in accordance with the train schedules, operating plan and all applicable regulations and statutes as she successfully does at Metra
- Direct daily operation of all trains, Train & Engine crews, terminals, yards and stations, transportation service planning, customer and employee safety and security, daily interaction and cooperation with partner railroads and all third-party occupancy/activity on the right-of-way, including Positive Train Control system contractors

A)2) Paul Garnett, Chief Mechanical Officer

Mr. Garnett has more than 15 years of experience working in the commuter rail industry to improve equipment reliability and maintain it to the strictest safety standards. As Superintendent of Equipment on the Virginia Rail Express (VRE), Mr. Garnett helped the commuter rail system reach record on-time performance and customer satisfaction ratings. Mr. Garnett has specific knowledge of the needs and capabilities of the MBTA's locomotive fleet, through his experience as a Superintendent of Locomotive Repairs for the current Operator, and previously with MotivePower Industries, the builder of the new fleet of locomotives ordered by the MBTA.

Experience

Keolis Rail Services Virginia Manassas, VA	• Superintendent of Equipment, 2012-Present • Asst. Superintendent of Equipment, 2011-2012
MBCR Somerville, MA	• Superintendent of Locomotive Repairs, 2007-2011 • Asst. Superintendent of Locomotive Repairs, 2006-2007
MotivePower Industries	• Customer Service Representative (Boise, ID), 2000-2006 • General Foreman of Maintenance (Kansas City, KS), 1997-2000

Education

American International University - Bachelor's, Business Administration

Southern Illinois University

Mr. Garnett will:

- Direct any and all Mechanical Department activities, including but not limited to inspection, maintenance, repair and maintenance planning for all MBTA revenue and non-revenue rolling stock fleets, shops and yards; customer and employee safety and security; daily interaction and cooperation with partner railroads and other third parties, including Positive Train Control system contractors; integration of new rolling stock fleets into the MBTA Service; and oversight of all mandatory and necessary training activities
- Provide oversight and direction for all production planning activities
- Be responsible for developing maintenance programs that maximize useful life and performance for the locomotive and the coach fleets as well as support property
- Complete every aspect of the agreement services in compliance with rules and regulations and to the high-quality standards we will implement

A)3) Jean-Bruno Delrue, M.B.A., Chief Engineer

Mr. Delrue, Engineer, has more than 20 years of rail experience at both the corporate and the field levels, in production, quality, procurement and project management. While in charge of the SNCF Infrastructure Division's International Development, he has been responsible for infrastructure engineering and maintenance proposals for several major projects in the United States, Morocco and Russia. He has also been in charge of developing partnerships with investment funds, PPP owners and other rail infrastructure operators. He has conducted a wide range of technical analyses and supplier audits, and he is skilled in change management and in complex systems organization optimization. Mr. Delrue supplements his technical skills and abilities with extensive knowledge of business subjects such as finance, strategic analysis, human resources, management and law.

Experience

SNCF Paris, France	• Head of International Business Development, 2009-Present • Head of the North Europe High Speed Line Infrastructure Maintenance Unit, Lille, 2006-2009 • Project Manager: Chairman's Office, Regional Manager's Office, Lille, 2006 • Manager of Telecommunications and IT Agency, Lille Region, 2003-2005 • Project Officer, Contract Management Support Unit, Lille Region, 2002 • Audits Officer, Procurement Department, Paris, 2008-2001
Française de Mécanique (PSA/ RENAULT) Douvrin, Pas-de-Calais, France	• Deputy Head of the Foundry Quality Department, 1998 • Head of Foundry Production Unit, 1994-1997

Education

Ecole des Hautes Etudes Commerciales (Business School), Lille, France - MBA

Ecole Supérieure de Fonderie (University of Foundry Engineering), Sèvres, France - Engineering degree

Ecole des Mines (Higher Engineering University), Douai, France - Engineering degree

In his new role as our Chief Engineer, Mr. Delrue will:

- Direct all inspection, maintenance, repair and maintenance planning activities for all MBTA right-of-way track, moveable and fixed span bridges, culverts and drainage structures, signal systems, stations, facilities and other infrastructure
- Be responsible for developing maintenance programs that maximize useful life and performance for support property assigned to the Engineering Department

A)4) Benjamin Vautrin, Director - Finance, Accounting and Administration

Mr. Vautrin brings strong analytical skills, a sense of accountability and attention to detail to our senior management team. He has a deep knowledge of financial management, including management reporting, financial analysis, budgeting, costing and performance monitoring. He has accounting and finance experience at both the operational and the corporate levels in a public transport environment, and he has developed a thorough understanding of the key business drivers for public transportation operations. Mr. Vautrin has a demonstrated ability to forge trustworthy working relationships both externally (public transport authority, shareholders) and internally (team members, colleagues, management).

Mr. Vautrin comes to us from his position as Financial Business and Reporting Manager, reporting to the CFO, for KDR Victoria, a joint venture between Keolis (51%) and Downer EDI (49%). KDR Victoria operates the Melbourne Tram network, the largest in the world. Mr. Vautrin has primarily responsibility for financial planning and reporting activities, and he oversees the finance team's involvement in budgeting and forecasting, collecting financial information and reporting, and providing financial support to the different areas of the business (operations, rolling stock and infrastructure maintenance, customer service and corporate).

Experience

KDR Victoria (Keolis Group) Melbourne, Australia	• Financial Business Planning and Reporting Manager, 2011-Present
Eurobus Holding (Keolis Group) Liege, Belgium	• Finance & Integration Manager, 2008-2011
Keolis SA Paris, France	• Principal Advisor to the Group CFO, 2003-2008
Crédit Agricole Indosuez Madrid, Spain	• Investment banking analyst, 2000-2002

Education

ESCP (Business School), Paris, France - Master in European Business with specialization in finance

Mr. Vautrin's new responsibilities will range from handling all financial management functions, including budget preparation, financial reporting, and accounting, to managing Inventory Control and handling contract management.

A)5) Ronan Coatanea - Director - Customer Service

Mr. Coatanea is an extremely well-respected commercial and marketing expert within the Keolis family. Since joining Keolis in 2000, he has successfully defined the marketing and commercial strategy, first for the transit operations in Brest, and more recently the managed contract including light rail and buses in Rennes. In this role Mr. Coatanea manages a team of 40 Customer Service Representatives and a marketing budget of $2.5 million. He focuses on improving the customer experience by working with other local public transportation providers, as well as the local authority, which has led to increased ridership and customer satisfaction results. As a consequence of his success and reputation, Mr. Coatanea frequently supports other Keolis operations to improve their marketing and customer service strategies, sharing his experience and know-how within the group.

Experience

Keolis France	• Commercial Director, Keolis, Rennes, France, 2007-Present • Marketing Manager, Keolis, Brest, 2000-2007
Eurotunnel London, UK	• Product Manager for Freight, London, UK, 1997-2000 • Customer Relationship Manager, London, UK, 1994-1997 • Market Research Manager, London, UK, 1991-1992
Morrison Miller Associates London, UK	• Consultant, London, 1990-1991

Education

Universite de Lille I (Lille University), Lille, France - Masters in International Business

Institut Superieur de Commerce International (Business School), Dunkerque, France - Business Administration

Mr. Coatanea will:

- Oversee all customer interface efforts, and work under the guidance of Transportation Management and the Chief Dispatcher to ensure timely response to customer complaints
- Focus his enthusiasm and attention to detail to continuously infuse and measure customer service and performance throughout the organization so that the MBTA Service ridership increases and the MBTA's revenues, as a result, increase as well

A)6) Justin R. Vonashek, Director - Safety, Security, Emergency Preparedness and Response and Regulatory Compliance

In his position as Director - Regulatory Compliance for Metra, Mr. Vonashek was named by *Progressive Railroading* as one of 20 "Rising Stars" of North America's railroad industry in 2013. Mr. Vonashek is recognized for his ability to design and implement innovative safety programs at Metra. His accomplishments include managing the selection, procurement and implementation of a fatigue model (FAID or FAST) in accordance with 49 CFR Part 228 (Passenger Hours of Service); designing Metra's Hours of Service Report in accordance with 49 CFR Part 228.1; developing an Electronic Device Distraction employee awareness campaign; and developing a Peer-to-Peer program for train employees regarding electronic devices.

Mr. Vonashek also has experience monitoring and evaluating operational testing, train performance, and employee performance at Metra and other rail operations, and he has overseen Metra's safe and effective responses to service disruptions, minimizing train delays and passenger inconvenience. He has served extensively on numerous safety-related committees and working groups for APTA, FRA, AAR and other rail safety-related organizations. Mr. Vonashek is an in-house Human Behavior Science / Fatigue Management specialist and a certified Conductor.

Experience

Metra Chicago, IL	• Director, Regulatory Compliance - Operations Department, 2011-Present • Manager, Schedules and Services - Transportation Department, 2008-2011 • Corporate Trainmaster - Transportation Department, 2007-2008 • Transportation Specialist - Chicago Union Station District, 2005-2007

Education

Illinois Institute of Technology (IIT) Stuart School of Business - MBA (anticipated)

IIT - B.S. in Computer Information Systems with a minor in Business Management

Independent Coursework:

National Incident Management System (NIMS) IS-100, IS-200, IS-700, IS-800

Basics of Fatigue, Institutes for Behavior Research

Pro-Active Terrorist Recognition Interdiction and Observation Tactics System (P.A.T.R.I.O.T)

Rail Operations Control Center Response to WMD Incidents, National Transportation Institute

Mr. Vonashek will:

- Lead the development, application and management of our Operator Safety Compliance Plan and Operator's System Security Compliance Plan
- Manage the investigation and the reporting of incidents, accidents, derailments, near misses, close calls, safety-related complaints, safety critical rules violations and other safety concerns, hazard

management, risk reduction and corrective action plans, and other regulatory, the MBTA's and our safety initiatives, rules, programs, orders and processes
- Direct the comprehensive safety training of all employees

A)7) Franck Dubourdieu, Director – Quality and Environmental Services

Mr. Dubourdieu has a strong technical and commercial background, which he gained working in a variety of passenger railroad operations over the past 20 years. His experience with SNCF, as Director for the Transilien Commuter Rail Lines and Regional Director for the South East Paris Region, will be especially valuable to us. In this organization, which operates 500 trains and serves 550,000 passengers daily, Mr. Dubourdieu implemented quality programs, such as Lean Six Sigma, in both the operational and commercial departments. He also managed a number of projects aimed at improving the operational performance of the lines, including improving train planning, dispatching and run cuts, as well as overseeing mid-and long-term infrastructure projects on the lines and at stations.

Experience

SNCF Paris, France	• Deputy Regional Director, South East Paris, 2012-Present • Director for Transilien Lines D&R, Paris, 2010-2012 • General Manager, ETGV, Le Mans, France, 2010 • Operational Director, Nantes, France, 2006-2010 • Assistant Operational Director, Paris, France, 2006
Eurostar International Ltd. London / Paris	• Sales and Marketing Director, London / Paris, 2001-2005
SNCF Paris, France	• Marketing Team Leader, Paris, 2000-2001
Rhodia Paris, France	• Commercial Director for Northern Europe, Paris, 1998-2000
Rhone-Poulenc S.A. Paris, France	• Project Manager, 1997-1998 • Junior Auditor, 1996-1997
Rail Europe Italia Srl. Milan, Italy	• Deputy General Manager, Milan, Italy, 1994-1996

Education

Institut Commercial de Nancy (Nancy Business School), Nancy, France – MBA

As our Director for Quality and Environmental Services, Mr. Dubourdieu will:
- Use his unmatched experience in various fields such as Mechanical, Engineering, Safety and Quality, to manage the quality of all aspects of the work of the contract
- Ensure adherence to all instructions, processes and procedures documented through the Quality Assurance Plan and manages the implementation and the tracking of such Plan through various quality control and auditing activities
- Oversee engineering disciplines, with emphasis on those areas directly associated with customer and employee safety and comfort, environmental engineering and compliance, and all regulatory compliance without limitation, including FRA, OSHA, APTA, DEP, and FTA

- Provide leadership and direction for the development and implementation of our ISO 9001 certification program

A)8) George L. Hardwidge, General Manager, as proposed in its SOQ

Mr. Hardwidge has more than 44 years of experience in the passenger railroad industry, primarily with the Metra system in Chicago. Metra is the only commuter rail system in the U.S. that combines provision of services on some lines with its own workforce and on others with contract operators. As the Deputy Executive Director-Operations at Metra, Mr. Hardwidge was responsible for all operating components and operational functions of the Metra system, including Transportation, Engineering, Mechanical, Safety and Training. These functions involve more than 2,000 employees with an annual budget in excess of $700+ million dollars. Mr. Hardwidge also functioned as Executive Director in the chief executive's absence. He also managed a number of important capital projects, such as the development of Positive Train Control, major infrastructure construction and a nearly $600 million procurement for new passenger equipment.

Previously, as Chief Transportation Officer for Metra for 13 years, he directed all Transportation functions and activities, with responsibility for on-time performance of over 700 daily revenue trains, safety and rules compliance, and a full range of emergency and service disruption activities. Over the years, he has held a variety of other management positions in rail operations, gaining extensive experience with all operating components and operational functions.

Experience

Metra (Commuter Rail Division of the Illinois Regional Transportation Authority) Chicago, IL	• Deputy Executive Director - Operations, 2011-Present • Chief Transportation Officer, 1998-2011 • Director of Suburban Operations, 1995-1998 • Senior Trainmaster, 1990-1995 • Director of Rules, 1989-1990 • Rules Examiner, 1987-1989 • Control Tower Operator, 1986-1987
Consolidated Rail Corporation (Conrail) Cleveland, OH	• Trainmaster, 1985-1986
Chicago and Western Indiana Railroad Chicago, IL	• Train Dispatcher (12 years) and Control Tower Operator (5 years), 1969–1985
United States Army (Vietnam)	• Transportation Specialist, 1970-1971

Education

Chicago State University - B.S, Education

Wilson City College

In his new role, Mr. Hardwidge's primary responsibility will be to implement our vision of **Moving Further Together** with the MBTA and to lead the transformation to a performance-focused and customer-focused culture through endorsing quality of performance and customer service while assuring the absolute safety of the MBTA service and system. He will:

- Serve as the primary contact between us and the MBTA, assuring the transparency of all our activities and full, accurate, prompt reporting to the MBTA, and between us and other operating entities sharing use of the rail properties owned by the MBTA, as well as with any organizations and/or government entities with regulatory jurisdiction over passenger rail operations
- Approve any/all operational expenditures contained within the approved budget and/or necessary to respond to operational requirements
- Assume the overall responsibility for coordination between all business functions and for developing budgets

Mr. Hardwidge will lead our Mobilization effort and will ensure full contractual compliance and the timely submission of all contract deliverables.

ADDITIONAL POSITIONS

In addition to these required positions, we have opted to reinforce our senior management team by adding the following:

A **Deputy General Manager**, who will be responsible for coordinating and bringing together on a daily basis the efforts of the Transportation, Engineering and Mechanical Departments to assess overall system/service safety, quality, performance, customer satisfaction and service excellence. The Deputy GM will evaluate our performance in relation to our many objectives and goals for the MBTA Service, and will lead our efforts for continuous improvement and innovation in the Service. This position will enable us to conduct our succession planning activities, described Section 8.C. As the MBTA Service is one of the largest commuter rail systems in the U.S., there are only very few candidates available who fulfill the experience requirements for the GM position. By creating the Deputy GM role, we will ensure that there will never be a vacancy in the GM position, as our Deputy will be able to seamlessly take control of our operation of the MBTA Service, if necessary.

Gerald Francis, Deputy General Manager

Mr. Francis is our candidate for the Deputy GM, a new position which we are proposing. Mr. Francis has 33 years of experience leading major transit and transportation systems, including commuter, heavy rail, light rail, freight rail, paratransit service operations and new rail startups.

Mr. Francis directed all daily commuter rail services for TASI in San Jose, and he directed the successful mobilization transition and startup for the Caltrain commuter rail system. He has overseen the delivery of major construction projects and the implementation of new technology to ensure a safe and reliable system.

Mr. Francis has a successful track record of providing solutions for systems with aging infrastructure and complex labor relations, scheduling and operations challenges. He has successfully promoted transit as a regional transportation solution by developing productive relationships with regional and local oversight groups, transit property Board members, regulatory agencies and citizen groups. Mr. Francis has chaired APTA's Rail Standards Committees, and has held other national leadership roles in the rail industry.

Experience

Herzog Transit Services Dallas, TX and San Jose, CA	• Assistant Vice President of Business Development (Dallas, TX), 2012-Present • General Manager, TASI (San Jose, CA), 2010-2012

DuPont Sustainable Solutions	• Principal Safety Consultant, 2010 (5 months)
Washington Metropolitan Area Transit Authority Washington DC	• Deputy General Manager and Chief Operations Officer, 2007-2010
Los Angeles County Metro Los Angeles, CA	• General Manager, Rail Operations, 2002-2007
Dallas Area Rapid Transit (DART) Dallas, TX	• Assistant Vice President, Rail Operations, 1999-2002 • Senior Manager, Central Rail Operations, 1995-1999
Bistate Development St. Louis, MO	• Transportation Supervisor/Controller, 1993-1995
Other	• United States Postal Service; Union Pacific Railroad

Education

Creighton University - B.S., Business Administration

A **Director - Human Resources & Training**, who will ensure that our employee and labor relations management initiatives reinforce the performance-focused and customer-focused culture we want to implement. This position will be instrumental in ensuring that our employees are engaged and motivated to continuously improve the MBTA Service, and that the cultural change we will effect is sustainable.

A **Director - Equal Opportunity, Diversity and DBE Management**, who will enable us to support the MBTA's equal employment opportunity and diversity initiatives, as well as ensure that our employment policies and procedures are equitable and that our affirmative action plan is in compliance with relevant regulations.

A **Chief Information Officer** who will lead our information technology initiatives and programs, and who will enable us to share information on the service with the MBTA effectively. This position will be critical in ensuring that the service remains up to date with technological developments and implements state-of-the-art innovations.

A **General Counsel & Director-Labor Affairs**, who will manage all legal aspects of the service for KCS, and will ensure that our relationship with labor and the unions follows our partnership approach and supports our goals for the service.

Finally, as discussed in detail in Section 3 Security Plan, due to the sensitivity of passenger rail services, we always work in close coordination and integration with experienced law enforcement and security experts to ensure the security of our passengers and of our employees. Accordingly, for the MBTA contract, we have arranged for the services of Mr. Thomas F. McCarthy to fulfill the role of **Security Liaison to the MBTA Police Department**.

Mr. McCarthy served a total of 30 years in law enforcement in the Boston area. In 2005, after a career spanning 26 years, he retired as the Deputy Chief of Investigative Services for the MBTA Police. From May 2005 to April 2010, he served as the TSA Assistant Federal Security Director for Surface Transportation, New England. He was the federal representative responsible for coordinating federal security programs with mass transit, passenger rail, freight rail and other surface modes of transportation.

8.B. DESCRIPTION OF HOW THOSE FUNCTIONS WILL BE MANAGED IF DUTIES ARE TO BE DISTRIBUTED IN A MANNER OTHER THAN THAT DESCRIBED IN B13.2 (SUCH AS THE COMBINING OR SPLITTING OF FUNCTIONS, IF PERMITTED BY THE CONTRACT), IF NECESSARY

Our GM and his key managers will fulfill the responsibilities for each position detailed in Schedule 3.9. In addition, we will reorganize the responsibilities for three key business management processes — **Material Management and Procurement Services**, **Quality Assurance and Environmental Services**, and **Operational and Financial Reporting** — and place them under specific members of the key management team, as described in this Section.

8.B.1. Material Management and Procurement Services

Material Management and Procurement Services (MMPS) are a critical part of ensuring a smooth running commuter railroad operation. Our MMPS Plan — which will be finalized during Mobilization, as described in Section 12 Mobilization Plan — will ensure that we have the right amount of the right spares in the right place at the right time.

Under our proposed organizational structure, responsibility for implementing and managing the MMPS Plan is placed with the Manager, Materials Control & Procurement, who will report to our Director - Finance, Accounting

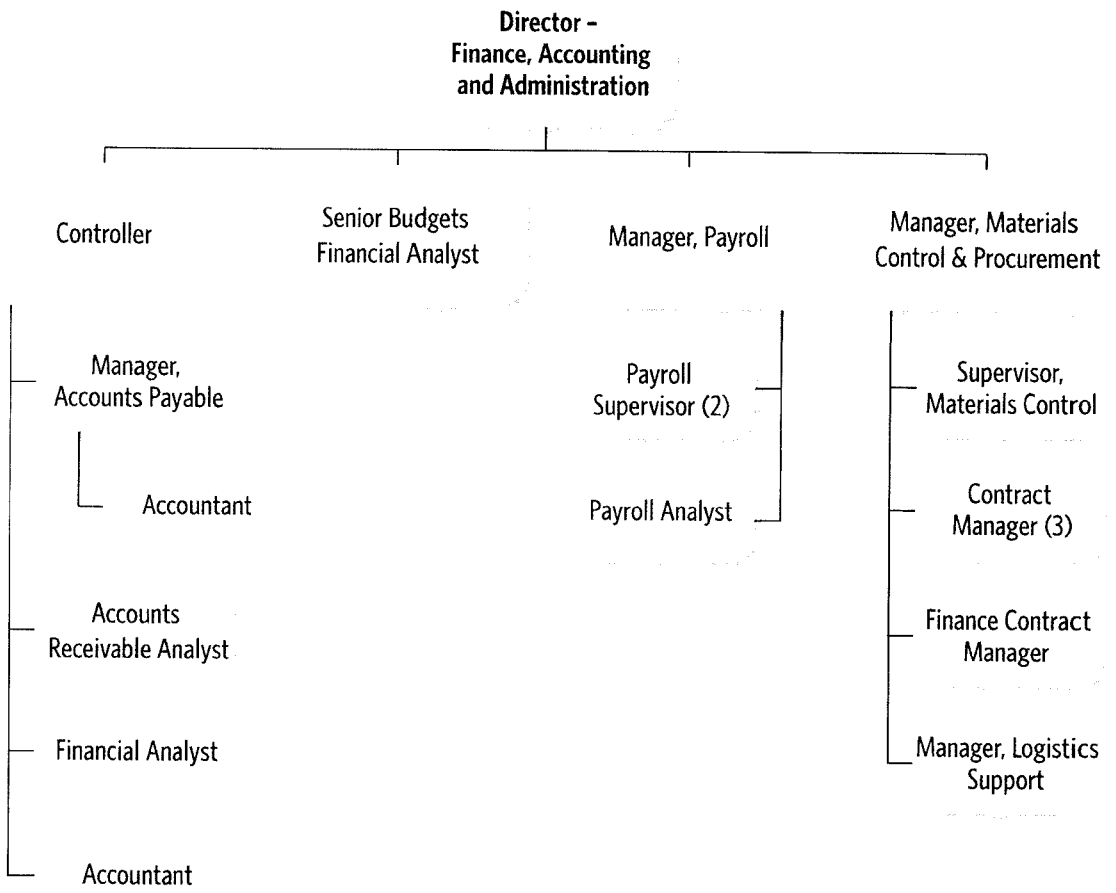


Figure 8-4: Finance, Accounting and Administration Department Organization Chart

and Administration. They will oversee the efficient functioning of the MMPS function, as described below.

In addition, because the MMPS function spans multiple operating departments, the Manager, Materials Control & Procurement will manage required interfaces with the Materials Manager placed within the Mechanical Department and the Roadmaster, Materials in the Engineering Department.

By formally developing subgroups within the Mechanical and Engineering Departments, we will be able to develop a more accurate inventory of all Support Inventory and Support Property throughout the MBTA Service. This approach is modeled on the successful experience of the Metro-North Railroad (MNRR) in developing an Engineering Department purchasing and materials management plan along the same lines as its new MOW Materials Management Department. By establishing a materials management department within its Engineering Department, MNRR was able to provide more controls and structure to purchasing, materials management and disposal of material.

Material Management Information System Plan

Our Material Management Information System Plan will include, but not be limited to, maintaining an inventory of all existing materials and parts; optimizing stocking of materials and parts; calculating the costs of materials and parts used for work orders; controlling the ordering of materials and parts; and tracking specific materials, including materials for Supplemental Work Projects, serialized components, budgets and project costs. These activities will be managed by comprehensive MMPS planning, tracking and recordkeeping systems.

Planning, tracking and recordkeeping systems are vital for maximizing vehicle availability and reliability and providing ongoing support to the Engineering Department for maintaining the right of way. We will implement a system that will allow Material Management to project required inventory levels by pulling information directly from the Mechanical Department's capital, new fleet introduction and planning processes, and from the Engineering Department's capital plan and maintenance plan. The system will additionally track usage, and provide functionality for Repair and Return (R & R) Administration, Serialized Components and Warranty Administration.

The key element of a successful procurement plan is accurately understanding the condition of current equipment and components, and planning early to ensure sufficient inventory to handle all normalized maintenance while not investing unnecessarily in excess safety stock. We are prepared to conduct a full initial physical inventory of all Support Inventory and Support Property (referred to in our Proposal as "material"), and we will perform year-end physical inventory during the fourth quarter of each contract year. The inventory will include all material in direct control of the stores department as well as material pre-positioned into the shops and field (working stock and protect stock).

A significant amount of Engineering Department material, including new, fit and scrap material, is currently spread along the right of way in strategic locations. To allow an accurate initial inventory position to be established, we will assist the field operation in identifying both the amount and location of available fit material, and the scrap material that must be disposed of or sold. Upon creating the initial inventory baseline, the stores department will track major credits and debits to the system, as well as review the usage rate for each item and check for trend lines from year-end inventory data.

We plan on retaining the current Materials Management and Purchasing protocols, including utilizing a Perpetual Inventory System in which the value of new items arriving into the storehouse and the items issued by the storehouse are balanced at the end of each calendar day. That is to say, the total value of inventory on hand will be reduced by the price of the inventory item issue for use; and the total value of inventory on hand will be increased

by the value of items received into the system each day.

While stock-out is a major concern, an equally serious concern is the need to protect against surplus property or inventory. We will implement controls to protect against developing surpluses, including keeping accurate inventory records; accurate and ongoing tracking of usage; coordinating with the customer departments to understand projected future usage and relating that to historical use; and establishing appropriate stocking protocols. We will use historical stock levels and inventory turns to determine a baseline of inventory required, but we will also incorporate data from current maintenance and operations capital plans to determine future inventory levels required for the ongoing use of various items. This will allow us to minimize surpluses and reduce unnecessarily inflated inventory carrying costs.

We will also adopt mechanisms, to the extent possible, such as the development of "kits" combining all the parts required to complete a specific job or assignment. Kitting is a proven mechanism to minimize the natural habit of "grabbing an extra gasket or two" or similar behaviors, which significantly increase the cost of inventory, one small item at a time.

While it is never possible to entirely protect against periodic surges in inventory, we will also ensure that all possible mechanisms are included to provide for surplus goods returns.

Support New Rolling Stock Acquisitions

Keolis and SNCF have significant experience of introducing new fleets into service, including for the Virginia Railway Express, where we recently introduced new fleet elements. As a result of our experience, we have very strong relationships with a wide range of manufacturers.

We believe that the early involvement of the operator with the manufacturer is key to the successful introduction of new equipment. To make sure that the new equipment is performing correctly when placed in service, we will set up a rigorous acceptance and testing protocol to eliminate defects or potential failures. During the acceptance process, it will be the responsibility of the Acceptance Engineer to inspect and test the unit for compliance to design specification and for service standards. Additionally, we will ensure that the manufacturer has adequate supply of spare parts and capital spares.

Obsolete and Scrap Support Property and Support Inventory

During our annual inventory, we will identify material that is obsolete or scrap. Obsolete, surplus and scrap material will be identified during the annual physical inventory, and will be reported to the MBTA. The obsolete, surplus and scrap management process will include protocols regarding proceeds of sales, as well as escrow account provision, reports and credit.

However, no product becomes obsolete overnight. Consequently, our Material Management function will work with Mechanical and Engineering Departments to understand proposed process and equipment changes and the impact of those changes on current inventories and stocking protocols. By managing the inventory process collaboratively, we will be in a position to "work off" current inventory to a significant degree, thereby reducing the amount of obsolete material to be disposed of or returned to vendors.

In addition to the scrap material discussed above, there is significant material that must be disposed of on a regular basis. A key element in the disposal process is to identify any elements that can be beneficially reused, and on the other end of the spectrum, any material that could cause a safety concern and therefore requires special handling. Once those elements of the scrap stream are identified and addressed, then the remaining scrap material can be sold or disposed of in the most expeditious and cost efficient manner.

Definition of critical or unique material and necessary stocking levels

Support Inventory to be used in the Agreement Services will be first-quality products and conform to OEM specifications and comply with all local,

state and federal regulations. We will acquire material that is identical to and interchangeable with parts, material, circuits, logic, ergonomics and dimensions on the existing Service Property, unless otherwise specified.

Critical material is that material which, if not available, would precipitate the need to curtail or suspend a portion of the operation. To protect against such an event, we will maintain a list of all Critical Materials, and the required stocking levels for all such material in order to make sure material is available in sufficient quantities to support Agreement Services, taking into account seasonal and operational fluctuation of use.

Unique material is material that is either no longer manufactured or in such short supply that alternative means of acquiring replacement parts (up to and including manufacturing, or having manufactured, replacement units). We will identify all unique materials as well as a viable mechanism by which unique parts will be made available to protect the Agreement Service.

Storage and Handling

All material, except for low-value consumables and common use hardware, will be kept in secure storage areas in order to minimize the incidence of undocumented consumption, hoarding, pilferage and other modes of undocumented inventory depletion. This includes outdoor storage of maintenance of way and other large, durable or slow-moving material. We will maintain secure areas throughout the system to store new, refurbished and fit material. Support Property and Support Inventory will be properly handled and protected to prevent damage, ensuring adherence to any OEM recommended storage requirements.

On our site visits, we felt that the organization and storage methods within storerooms were appropriate, although the storerooms were crowded. However, we believe that a stronger focus on inventory held outside designated storerooms will improve both storage and security. We observed high-value items such as batteries being stored along aisles within the shop at CRMF, and Communications and Signal materials stored haphazardly about the shops. While it makes sense to pre-position material to the location of its final use, this should be done in an organized manner that allows for safe and proper storage and handling of the forward positioned inventory.

Material Storage and Handling has to include the disposal and recycling of waste materials. We are committed to do so in all cases in a safe and legal manner. Storage and Handling will comply with all applicable laws concerning Material Safety Data Sheets, storage and handling of hazardous solid and liquid materials, as well as scrap and waste material management. Our methods for handling hazardous materials are described in the environmental protection section below.

Bulk fuel used for locomotives and work equipment will be stored and handled in compliance with all state and federal regulations, as well as in accordance with all applicable Spill Prevention Control and Countermeasures Plans. We will review all protocols relating to bulk fuel oils and determine where efficiencies and improvements can be made.

Separate Capital Funded Material (Capital Spares) Sub-Storehouse

We will either identify specific caged areas at each of at least two stores facilities where capital spares can be segregated from other Support Property and Support Inventory, or designate a secure off-site location for such capital spares. All capital spares will be stored in such a manner as to protect the capital spares. In some cases this will require capital spares to be covered or shrink-wrapped. An appropriate materials management plan for each capital spare will be determined prior to receipt of such spares. No spares will be used, borrowed or in any other way compromised. When we determine that a capital spare is required to replace a part or component, we will provide a Capital Spare Request Form to the MBTA.

Warranty Control and Administration

A major component of the maintenance function is the enforcement of warranties and the

subsequent reimbursement to the MBTA for the costs of these repairs. The parameters for warranty work will be identified and defined for new cars and locomotives, as well as for third-party suppliers and vendors. All warranty work performed by us will be done on force account, so that all costs will be borne by the manufacturer.

Currently there are three active contracts for major warranty work; for Rotem coach delivery, locomotive delivery and Kawasaki mid-life overhaul. These warranty agreements have a negotiated labor rate of $100 per hour for the warranty period, which includes direct labor, overheads, and general and administrative (G&A) costs. The agreed-upon labor hours for each warranty repair are negotiated prior to delivery. Proposed warranty procedures are generally developed from the Maintenance Allocation Chart (MAC) submitted as part of the documentation package. The hours allowed to replace each part specified in the MAC are based on estimates initially developed by the car builder and agreed to by the MBTA.

The three contracts lay out the protocols for determination of acceptance, and in each case contain language that provides the MBTA with additional relief if more than a specified number of units fail during the life of the contract. If a certain hurdle rate is met or exceeded, the entire class is considered to have failed. Furthermore, there are mechanisms for liquidated damages if the Material Requirements of the contract are not met on a timely basis. We have reviewed the terms of the current three major warranty projects cited above, and are comfortable that we can administer the contracts as presented. We believe that our experience in dealing with similar warranty and acceptance work elsewhere will provide a benefit to the MBTA and could provide a platform for value engineering.

Repair and Return (R&R) contracts for the refurbishment of certain equipment or modules also include specifically designated warranty periods. This contract rate will include direct labor, overheads, and general and administrative costs, as well as language addressing the replacement of a defective vendor-repaired unit within the warranty period. The designated warranty period for an R&R vendor may run from 30 days to two or more years. Except in the case of a defective vendor-repaired unit, costs for the

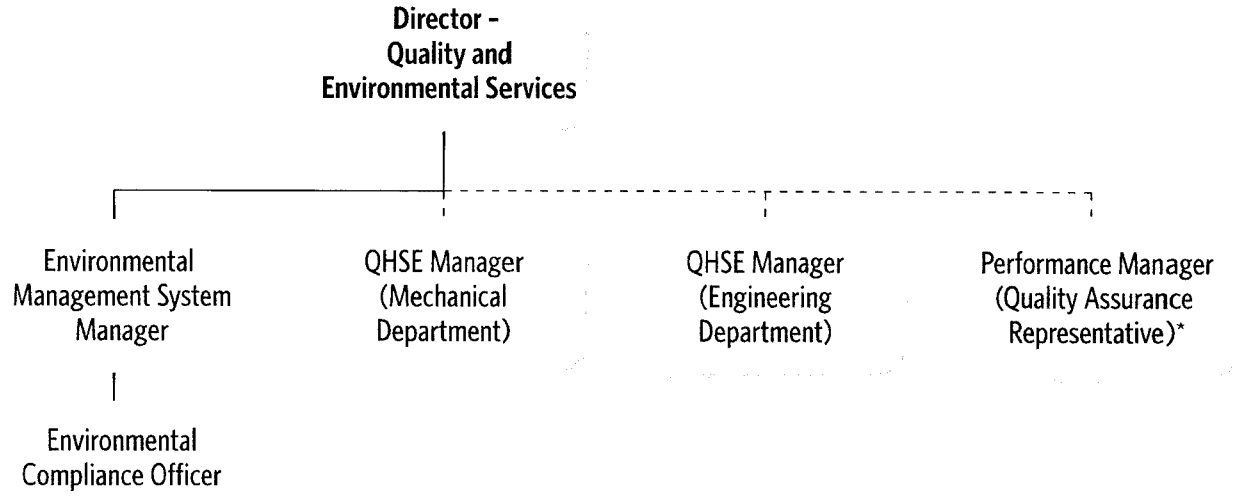

Director - Quality and Environmental Services
Environmental Management System Manager
Environmental Compliance Officer
QHSE Manager (Mechanical Department)
QHSE Manager (Engineering Department)
Performance Manager (Quality Assurance Representative)*
*Shared resource — Transportation & Customer Service Departments

Figure 8-5: Quality Assurance Department Organization Chart

removal and replacement are borne by the MBTA and operator.

Each time a part is replaced, the operator will initiate a Field Service Report (FSR) that accompanies the work order entered into the MMS system. The FSR indicates the exact nature of the part to be repaired or replaced, the defect, and the estimated number of MBTA Operator labor hours to effect the removal and replacement of the part. The Field Service Report is the mechanism to ensure that the car builder or the "Repair and Return" (R&R) vendor has agreed to the warranty work (and operator expenses as needed) before an Accounts Receivable Invoice is generated.

We are strong proponents of the Warranty Defect Tag (WDT) system. The WDT mirrors the data that has been entered into the MMS system and the Field Service Report. We will track all WDTs and put in place rigorous management controls to ensure a successful third-party warranty administration program. The vendor, by signing the FSR, agrees to the costs of both the repair and, in the case of a warranty repair, the labor charges identified on the FSR.

We will produce a monthly Warranty Control and Administration Report, containing current and previous year data on the number of FSRs issued, the number of open FSRs, the number of third-party warranty claims, the amount of reimbursement invoiced to date and amount of reimbursement received to date.

Integrating new technologies and work practices as introduced by the Operator or the MBTA

We believe that prudent use of fuel and lube oils is a key mechanism to controlling costs. Locomotive idling minimization is but one of several initiatives that we are excited about exploring as a means of reducing the cost of fuel to the MBTA. In support of developing further information on fuel use and those mechanisms that may be available to improve fuel and lube oil usage rates, we will develop monitoring programs and modules as part of the simulator training for Locomotive Engineers.

Compliance with reporting required by US DOT, FRA, EPA, MDTE, APTA, FTA

We will comply with all applicable laws, rules and regulations. For purchasing, we understand this commitment relates to all aspects of procurement law, EEO law and generally accepted business practices to ensure a fair and open procurement process for DBEs. For inventory and valuation, we will strictly adhere to industry standards and Generally Accepted Accounting Practices (GAAP) in managing and accounting for all acquisitions and disposals of inventory and property.

For materials management, we understand the requirement to have on-hand Material Safety Data Sheets (MSDS) for all chemicals, liquids and other commodities, and the need for development of appropriate site safety documents, oil water separation plans, hazardous material handling plans and storm water management plans and other environmental plans and protocols as required by Federal, state of local agencies, regulations or laws. We will adhere to all such laws, rules and regulations, as discussed below in our section on environmental protection.

8.B.2. Quality Assurance and Management System and Environmental Services

On behalf of our General Manager, our Director - Quality and Environmental Services will be responsible for developing and maintaining the system, as well as for ensuring that our quality objectives are met and for promoting a culture of continual improvement in all services provided to external customers, as well as in all internal operations. As shown below, our Director - Quality and Environmental Services will be assisted by the Quality Representatives in each functional department:

- QHSE Manager in the Mechanical Department
- QHSE Manager in the Engineering Department
- Performance Manager (Quality Assurance Representative), shared between the Transportation and Customer Service Department

The purpose of implementing a quality management system is to ensure that all business activities operate in a controlled manner and that the individuals responsible for various activities know and understand their roles and responsibilities. The ISO 9001 standard provides a structured and flexible framework for a customer-focused Quality Management System (QMS) that drives performance improvement. In our experience, the implementation of ISO 9001 provides organizations with measurable improvements in their overall business performance, effectiveness and efficiency. We will therefore establish, document, implement and maintain the Quality Management System in order to improve its effective compliance with the requirements of ISO 9001:2008.

The QMS covers all aspects of the organization's activities; identifying its key processes, defining roles and responsibilities, policies and objectives, and documentation requirements. It also covers the importance of understanding and meeting customer requirements, communication, resource requirements, training, product and process planning, design processes, purchasing, production and service, monitoring and measurement of products and processes, customersatisfaction,internalaudit,management review, and improvement processes.

We will apply the following management principles:

- **Customer Focus:** We depend on our customers and therefore have to understand current and future customer needs, meet customer requirements and strive to exceed customer expectations
- **Leadership:** Leaders establish unity of purpose and direction for the organization. They create and maintain the internal environment in which people can become fully involved in achieving our objectives
- **Involvement of people:** People at all levels are the essence of our success, and their full involvement enables their abilities to be used to the company's benefit
- **Process approach:** Any activity or operation, which receives inputs and converts them to outputs, can be considered as a process. Almost all activities and operations involved in generating a product or providing a service are processes. For organizations to function, they have to define and manage numerous inter-linked processes. Often the output from one process will directly become the input into the next process. The systematic identification and management of the various processes employed within our operation and maintenance of the MBTA Service, and particularly the interactions between such processes, are referred to as the "process approach" to management
- **System approach to management:** Identifying, understanding and managing interrelated processes as a system contributes to the company's effectiveness and efficiency in achieving its objectives
- **Continuous improvement:** Continuous improvement is the process focused on continuously increasing our effectiveness and/or efficiency to fulfill our objectives. Continuous improvement responds to the needs and expectations of the customers and ensures dynamic evolution of the quality management system
- **Factual approach to decision making:** Effective decisions are based on the analysis of data and information
- **Mutually beneficial supplier relationships:** We depend on our suppliers — and vice versa — and a mutually beneficial relationship enhances the ability of both to create value

By applying the management principles described above, we will be able to:

- Integrate/align our processes to enable us to achieve our targeted performance, customer service and financial results
- Focus our efforts to ensure our processes are effective and efficient
- Achieve improved, consistent and predictable performance results for the MBTA Service, leading to increased satisfaction on the part

of the MBTA, our passengers and other stakeholders

- Make the operation and maintenance activities completely transparent within KCS and between KCS and the MBTA
- Lower costs and enhance responsiveness through effective and efficient use of resources
- Identify opportunities for focused and prioritized improvement initiatives
- Motivate and engage our people, and clarify their responsibilities
- Eliminate barriers between different functional units and ensure that each individual forming part of our organization is focused on our performance and customer service objectives
- Improve the management of process interfaces

As part of our QMS, we will identify the processes of the organization; plan the processes; implement and measure the processes; analyze the processes; and improve the processes. The following, drawn from our experience in operating similar public transportation systems around the world, illustrates the interconnectedness of our "process approach."

Management Oriented Processes (MOP) support the strategic planning, commitment, leadership, resources, review and decision-making by top management, as well as safety, innovation and performance management. These processes interact with all QMS processes at the QMS planning and review level. As an example, the Continuous Improvement and Innovation process is an MOP including business planning,

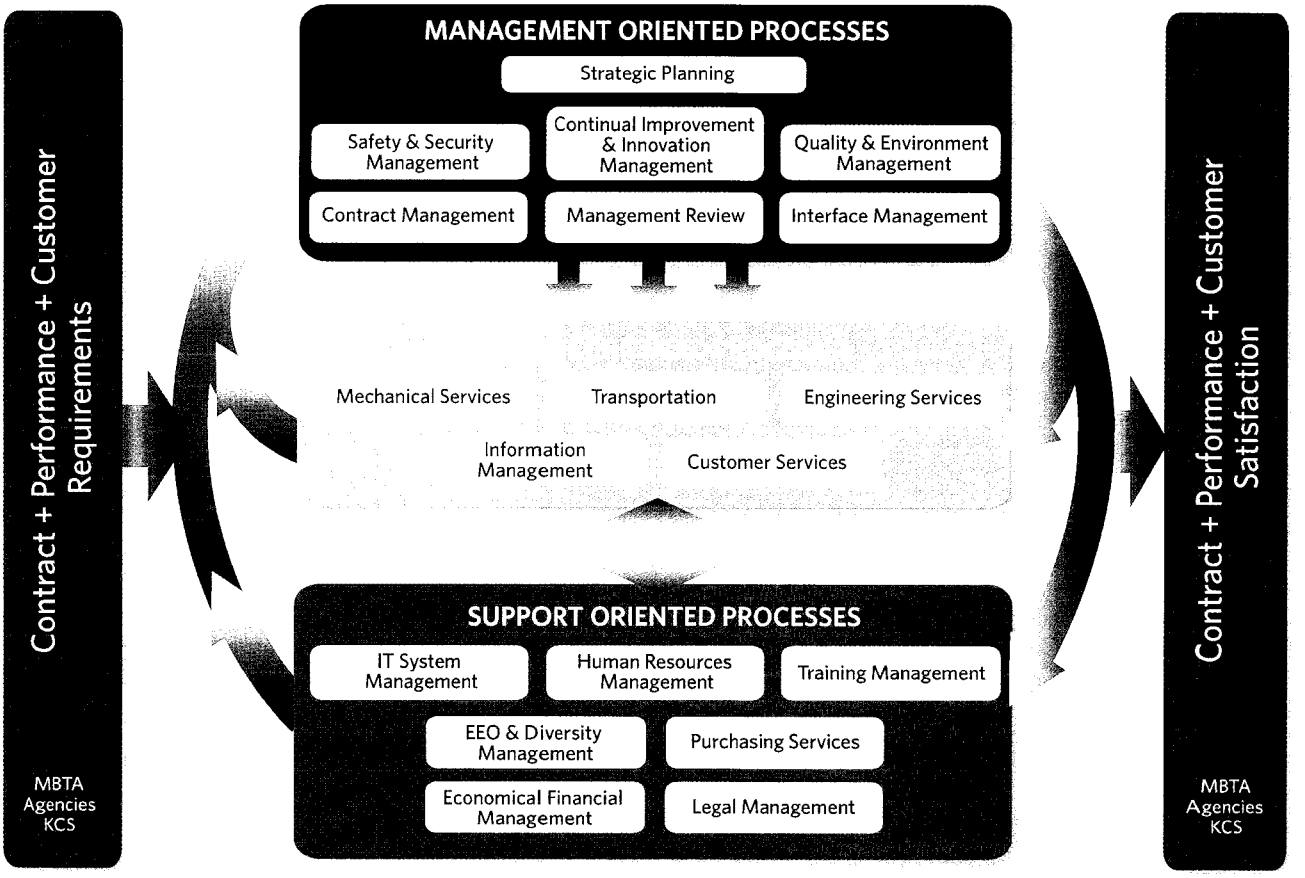


Figure 8-6: Our "Process Approach" to Quality Assurance

management review, quality planning, resource planning, innovation and communication.

The Quality & Environment Management Processes (QEMP), which are part of the MOP, are implemented from our QMS to document, measure, analyze and improve all processes. These processes provide quality management support to and interact with all our QMS processes. QEMP include document control; records control; monitoring and measurement of processes and products; internal audits; control of non-conforming products; corrective and preventive action; etc.

The **Customer-Oriented Processes (COP)** are execution processes that translate inputs — customer into the outputs — Transportation Services, Mechanical Services, Engineering Services, Customer Service and Information Management — that determine customer satisfaction. Our "customers" are the MBTA, the passengers, and the agencies (FRA, AREMA, APTA, MDTE, etc.).

The **Support-Oriented Processes (SOP)** provide the necessary resources to COP in order to facilitate operation and maintenance of the MBTA Service, as well as measurement and monitoring activities. These processes have the greatest degree of interaction at an operational level with COP, and to a lesser degree with other internal QMS processes. SOP include: Human Resources; EEO & Diversity, Training, Information Technology; Purchasing, Financial and Legal Management. Some of these processes may be outsourced and performed by a function or a company outside the ownership or managerial control of our company.

Measuring the Performance of our Processes and Improving Them

There are several methods of measuring process performance, ranging from simple monitoring systems to sophisticated, statistically based systems. The selection and use of any particular method will depend on the nature and complexity of the process. The effectiveness of an individual process is measured by the conformity of its output to customer or legal requirements. Its efficiency is measured from its use of resources.

Factors that we will consider when identifying measures of process performance include:

- Conformity with requirements (including but not limited to contract, applicable laws, railroad standards, etc.)
- Customer satisfaction
- Supplier performance
- Safety/security compliance
- Lead times
- Failure rates
- Incident frequency
- Application of the Environmental Policy (linked to the EMS)
- Application of requirements of regulatory bodies
- Process costs

The "process approach" we propose provides a way of obtaining a desired result by managing activities and related resources as a process. The "process approach" is a general management principle which can enhance our effectiveness and efficiency. It is a key element of the ISO 9001 standards.

The PDCA cycle is an established, logical, method that we will use to improve our processes, individually, as well as across groups of processes.

This requires:

- (P) planning (what to do and how to do it)
- (D) doing the plan (do what was planned)
- (C) checking the results (did things happened according to plan?)
- (A) act (how to improve next time)

Documentation

The Quality Management System documentation is a ready reference point to identify how, when, where and why a job should be done, or an activity managed. If job details are extensive or complex, we will use checklists in order to make sure that everything is done and in the correct

sequence. Documentation must reflect what is currently happening in the business.

The QMS will also ensure that the information is readily available and accurate. Therefore, documentation will be included in a computerized system, rather than a paper system.

We will implement document management software as part of our IT environment. The document management software will be used to create, capture, store securely, share and distribute documents as electronic files, ensuring that we can give access to the right people at the right times.

Our documentation system will be structured as a three-level pyramid shape, as illustrated below.

Figure 8-7: Structure of QA Documentation

The Quality Manual is at the core of our QMS. It addresses each area of the ISO standard and contains the basic description of the QMS (structure, responsibilities, processes). The Director - Quality and Environmental Services is responsible for writing, issuing, amending and distributing the quality manual, which will be reviewed regularly and updated to take account of new developments or requirements.

Procedures, Manuals & Instructions describe how the company's processes are run and controlled. Procedures are higher-level documents; manuals are middle-level documents; and work instructions are very specific.

We will maintain records within the IT environment and/or in the document management software to show compliance of the quality system, for feedback into the quality system, and historical reasons. Records traceability is compulsory for regulatory requirements and customer requirements.

Environmental Management

The environment has become a key factor in corporate policies and best practices among responsible companies, which face the challenge of complying with increasingly stringent legal and regulatory obligations, as well as stakeholder expectations. Massachusetts is one of the few states in the country to have established goals relating to these challenges. The Global Warming Solutions Act (GWSA) enacted in 2008 requires Massachusetts to set economy-wide greenhouse gas (GHG) emission reduction goals to achieve reductions of as much as 25 percent below 1990 statewide levels by 2020, and 80 percent below those levels by 2050. In compliance with the GWSA, in 2010 the Massachusetts Executive Office of Energy and Environmental Affairs launched the Massachusetts Clean Energy and Climate Plan for 2020 to help define Massachusetts' path towards meeting its statutory obligation to reduce GHG emissions.

The transportation sector generates more than one-third of the total greenhouse gas emissions produced in Massachusetts. In June 2010, the Massachusetts Department of Transportation (MassDOT) launched GreenDOT, a comprehensive environmental responsibility and sustainability initiative that will make MassDOT a national leader in "greening" transportation systems. In support of the GWSA and the MassDOT GreenDOT initiative, the MBTA

has begun taking steps to make progress in becoming a sustainable organization. In May of 2012, the MBTA Acting General Manager Jonathan R. Davis signed the American Public Transportation Association (APTA) Sustainability Commitment Pledge. The MBTA implemented an Environmental Management System (EMS), to serve as a platform for the management of its pollution prevention and environmental compliance responsibilities and programs.

Moving Further Together, we will build on the strengths of the existing programs and EMS and provide industry related leadership, expertise and an innovative approach to further advance the MBTA's sustainability goals.

Environmental Compliance:

Our ISO 14001-based Environmental Policy and Environmental Management Systems (EMS) will rely on the following principles:

- **Compliance** with all applicable laws and regulations, as well as with other requirements relevant to the environmental aspects of our activities, products, and services
- **Pollution prevention**, in order to seek to prevent pollution before it is produced and to minimize the organization's impact on the environment by establishing environmental objectives and targets aimed at improving its overall environmental performance. Environmental factors will be considered for planning, purchasing or making operating decisions
- **Awareness**, by communicating this environmental policy to employees, contractors, and suppliers to ensure their awareness of the organization's commitment to the environment, and by providing appropriate training to all employees to ensure their continuing awareness of environmental responsibilities
- **Continuous improvement**, to evaluate and continuously improve the effectiveness of the EMS through periodic audits, management reviews, and the achievement of the environmental objectives

In committing to this policy, we will:

- Evaluate all products for environmental effects, minimiz the potential for pollution
- Dispose of all solid or liquid waste in accordance with the requirements defined by regulation
- Review our environmental performance on a regular basis, and develop and implement procedures to ensure continuous improvement
- Develop and implement risk control incentives to minimize the potential consequences of accident and emergency situations
- Monitor our energy consumption on a regular basis, and implement energy reduction and efficiency improvement programs
- Establish objectives and targets to secure continual environmental improvements

Our ISO 14001-based EMS will consist of the five elements shown below to improve environmental performance. We will also adopt systems management techniques to benefit other areas of organizational performance.

The Resources, Roles, Responsibility, and Authority; Legal and Other Requirements; Evaluation of Compliance; and Non-conformity, Corrective Action and Preventive Action elements of ISO 14001 are all essential to the ongoing effectiveness of the EMS. They will be

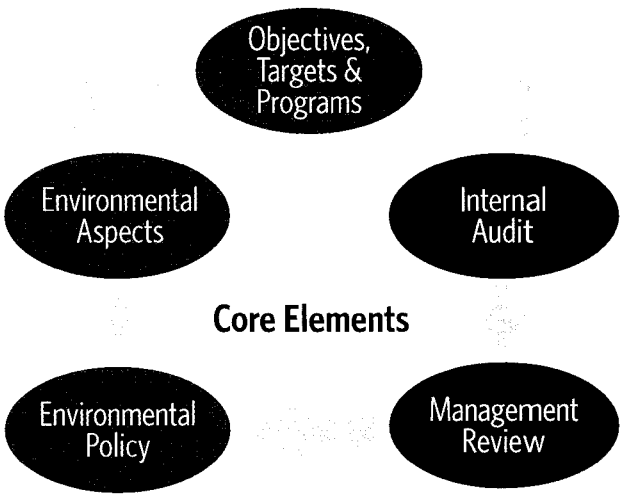


Figure 8-8: Environmental Performance Improvement Process

addressed in the Environmental Handbook in compliance with the ISO 14001 guidelines.

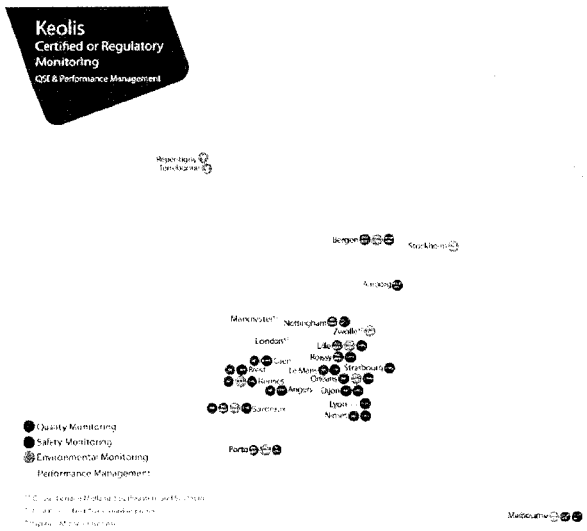


Figure 8-9: Keolis Environmental Management Systems Worldwide

We bring many years of experience executing and implementing Environmental Management Systems aligned to the recognized international standard ISO 14001. As part of the Keolis portfolio and as shown here, seven of the current subsidiaries worldwide are certified to this standard and others are working towards achieving this goal. The Keolis approach to the management of environmental services follows the implementation of the four key elements in the EMS pyramid, as shown next. Keolis is further committed to making sure that environmental performance targets are driven by continual improvement through the development of local EMS.

In recent years, the MBTA has advanced the course of environmental compliance by adopting and implementing an Environmental Policy and an EMS structure. This presents a good foundation towards setting ISO 14001 strategies and goals. The Director - Quality and Environmental Services will lead our efforts toward achieving ISO 14001 certification. We will establish measurable targets, prioritize goals and take real actions to help protect the environment, improve cost-effective operating standards and achieve overall sustainability.

Environmental Policy
Environmental Risk Assessment Environmental Sustainability Plan
Common System Procedures & Programs e.g. Risk Management, Training, Auditing, Document Control, Management Review
Standard Environmental Safeguards e.g. Soil and Water Management Plan Safe Work Methods

Figure 8-10: EMS Pyramid

Achieving ISO 14001 certification requires a comprehensive analysis of all environmental management systems. It also requires that environmental and sustainability performance be continually monitored and improved. To achieve ISO 14001, we will pursue our strategic objectives through changes that begin from the bottom up. It is important to promote a collaborative work ethic that supports transparency and accountability throughout all levels of the organization. To achieve a collaborative effort, the Director - Quality and Environmental Services will work with the MBTA to define ways to INFORM, EDUCATE AND ENGAGE all stakeholders of the benefits of becoming a sustainable organization.

We will work closely with the MBTA Environmental Department to execute the schedule of deliverables as required under this contract. Our Director - Quality and Environmental Services will oversee both the QMS and the EMS.

We will also have two Environmental Compliance Officers (shown in the organizational chart in Figure 8-5) to lead overall environmental compliance efforts and promote industry best practice. They will develop training in environmental issues, provide technical advice to the MBTA managers network as needed, monitor implementation of environmental policy,

review and report results, maintain up-to-date knowledge of state and federal environmental legislation, regulatory standards, and develop a positive, collaborative relationship with the respective stakeholder groups.

Keolis has a strong foundation in partnering with all stakeholders to achieve results in the implementation and management of EMS programs and to ensure that environmental issues remain at the top of the corporate agenda. Each environmental representative will have access to the EMS information in order to make the necessary arrangements for the effective management of environmental impacts, including links to environmental procedures, work instructions, training standards and environmental work methods. The Environmental Team will implement the existing EMS following the principles of environmental legislation, and will streamline the EMS information with the use of a customized Geographic Information System platform as shown below.

The Environmental Team will operate, maintain, and service environmental systems located throughout the rail system; maintain environmental permits, certificates and licenses as necessary to perform Contract services; and, maintain the Service Property.

Our EMS will be supported by CDW Consultants, Inc., a DBE company which provides more than 22 years of comprehensive, professional environmental engineering experience, including licensed site professional services. The firm's principals have combined their public and private sector employment experience and decades of engineering expertise to deliver high-level technical and management services. CDW's proven leadership and total familiarity with both the technical issues and the regulatory processes for a broad range of project scopes serves as a strong foundation for the MBTA Service's environmental aspects.

The Environmental Team is composed of one full-time Environmental Management System Manager (EMS Manager), one full-time Environmental Compliance Officer and an Environmental Subcontractor, responsible for three full-time technical staff. The EMS Manager will be responsible

Item	EMS Coverage
Governance	Setting the strategic direction, policy and key accountabilities Target setting and Management Review
Continued Compliance with environmental legislation	Register of applicable legislation and regulation Subscription to legal monitoring service and procession institutions
Communicating environmental messages	Comprehensive Environmental Communication Plan covering staff stakeholders, key messages, media, evaluation and review Design a GIS platform for the effective management of information amongst all stakeholder groups
Continued competence of staff	Training specification and delivery Communication and awareness of environmental issues Evaluation and assessment
Monitoring, auditing and reviewing compliance	Scheduled internal audit program External EMS audit High risk and project specific audits Incident and accident analysis Regular monitoring of environmental

Figure 8-11: EMS Coverage

for the coordination of the environmental affairs and will oversee compliance with all federal, state and local regulations, as well as MBTA commitments and policies related to environmental aspects. The EMS Manager will be responsible for working with the MBTA in fulfilling EMS objectives and strategic sustainability goals to meet the APTA Pledge. In addition, the EMS Manager will support the MBTA's goal to achieve ISO 14001.

The EMS Manager will be responsible for the following activities (among others):

- Implementation and administration of a multifaceted Environment Program
- Environment compliance training, compliance audits and resulting action plans
- Ongoing environment awareness education program
- Advice, direction and support to various client and company business units for environmental requirements and programs, as well as building management and project plans
- Development of environment-related procurement initiatives
- Performance assessments and awards initiatives
- Internal, external and contract quality monitoring program including ISO 14001 initiatives as they are developed
- Interaction with regulatory bodies to ensure full knowledge of regulatory requirements
- Identifying, evaluating and implementing policies and procedures to ensure awareness of and compliance with environmental requirements
- Support of field staff during the implementation of audits, building performance ratings and assessment tools
- Maintaining awareness of changing regulations and anticipates changes to operation that are required to meet those changes

Environmental Management Systems

The MBTA has implemented an EMS program and has begun to establish sustainability goals. This commitment to effective environmental management supports the Environmental Team in its obligation to fulfill work under this contract to:

- Improve environmental performance and compliance
- Advance pollution prevention practices to meet EMS objectives
- Further increase operational efficiency and potential cost savings
- Continue the reduction of risks
- Promote predictability and consistency in managing environmental obligations
- Promote employee stewardship
- Become effective in targeting of scarce environmental management resources
- Support and improve positive external relations and public image
- Build upon and enhance communication and public posture with outside stakeholders

The MBTA, as all other commuter rail systems owner, is held accountable for environmental impacts of their operations, including noise and pollution, and requires programs for the safe use, transport, storage and disposal of chemicals and substances from their operations. The Environmental Team will oversee, monitor, prepare and conduct all applications for permits, certificates, licenses and regulatory correspondence in order to effectively manage all environmental compliance under this contract. Under this contract, the EMS Manager will ensure that all permits, certificates, licenses and regulatory correspondence be submitted within 90 days of expiration. The Environmental Team will utilize a GIS platform to effectively manage the reporting process in a timely manner and generate Compliance Summary Reports on a monthly, quarterly and yearly basis as required under this contract. Copies of all correspondence to and from Regulatory Agencies will be delivered immediately to the MBTA.

Vehicle Emissions and Air Quality

Upon Notice to Proceed (NTP), the Environmental Team will assess all existing records on environmental compliance, including all testing, monitoring, permitting and reporting related to air emission controls. The Environmental Team will define tracking systems to manage the information for all permits

under this category. The Final Approval and Facility Wide Emissions Cap approved by the Environmental Protection Agency (EPA) contains specific emission limitations, conditions, and requirements that must be met. These conditions include:

- Maintaining Fuel usage logs, which are to include total monthly fuel usage for all combustion units, and total CRMF fuel usage for the previous twelve months
- Providing the MBTA with copies of all fuel usage logs and calculation of the past twelve months' fuel usage
- On-site maintenance of receipts and logs, made available for inspection by any regulatory agency upon request
- Maintenance of logs for the CRMF that include total locomotive engine hours per month and total engine hours for the previous twelve months. Engine hours will include the specific date and time that any locomotive is running within the CRMF, from the time it is started or enters to the time it is shut down, plugged in or exits the CRMF
- The name and signature of the responsible Supervisor in the fuel usage logs
- Engine hours calculated on a daily basis
- Submittal of monthly run time reports to the MBTA

Hazardous Materials Management

Under this section, emphasis is placed on the issues of handling and storing potentially hazardous materials safely, with the end result of protecting people and the work environment. Examples of areas to be addressed include storage vessel construction, alarms and signage

CASE STUDY: Implementation of Iso 9001 Certification at Keolis's Operation in Lille, France

Keolis operates the entire public transportation offer in Lille, northern France. Keolis implemented a first Quality Assurance Plan in 1994, when the 2nd metro line and a new tram operation started up in the city. In 1996 we achieved the first ISO 9001 certificate for metro and tram activities in Lille, and since 2003 all our activities in Lille have been certified according to the ISO 9001 standard.

Today, our ISO 9001 deployment is focused on core process management and continuous improvement of our customer satisfaction and quality results. It allows us to promote collaborative working and the use of key performance indicators at every level of the organization.

In 2003, when our Quality Management System extended to all activities in Lille, a Quality Department was created, which took on responsibility for Corporate Social Responsibility in 2007. Since then, 20 core process have been redesigned, and 58 managers have been trained for quality and process management. Today, the Quality & CSR Department (which is also responsible for ISO 14001 and the Environmental Management System) has developed collaborative management tools to manage the 20 business process :

Collaborative meetings	Frequency	Leader / participants	Purpose	Key performance indicators
6 Quality Improvement Committees (4 for each bus depot, 1 metro-tram, 1 bicycle)	Monthly	Quality department / Transportation, Maintenance, Commercial representatives	Following quality control plan and quality improvement plan	PTA controls results Customer claims

CASE STUDY, continued: Implementation of Iso 9001 Certification at Keolis's Operation in Lille, France

Collaborative meetings	Frequency	Leader / participants	Purpose	Key performance indicators
6 Quality Improvement Committees (4 for each bus depot, 1 metro-tram, 1 bicycle)	Monthly	Quality department / Transportation, Maintenance, Commercial representatives	Following quality control plan and quality improvement plan	PTA controls results Customer claims
Quality Department Review	Annual	Quality Department / Steering committee	Define annual quality objectives Share quality results and 20 core process efficiency Define new projects	Customer satisfaction survey PTA controls results Key process indicators
20 Process reviews	Bi-annual	Process Pilots / Internal suppliers & customers	Review key process indicators Following process improvement plan	Key process indicators Internal supplier & customer claims
8 Customer Committees: 1 for each area in Lille	Annual	PTA / Customers, Commercial, Transportation, Quality	Live customer survey and exchange	Customer claims and congratulations

As a consequence of the implementation and management of ISO 9001, our penalties incurred for quality measures reduced by 50% between 2004 and 2008.

Keolis Lille now uses dynamic customer surveys with internet panels to measure the effectiveness of ISO 9001. Between 2011 and 2012 the percentage of customers who were "extremely satisfied" with Keolis's service grew from 14% to 22%.

emergency response (i.e., emergency medical response, preparedness drills), personal protective equipment and installations (i.e., respirators, gloves, shower/eyewash stations, etc.), inventory and compatibility issues, waste collection and handling, and established work practices. The proper use of engineering controls will be emphasized in all established work practices. The Superfund Amendments Re-authorization Act (SARA) Title III and Community Right-to-Know issues have been crucial to managing environmental concerns on site, and managing community relations off-site.

In compliance with OSHA requirements, the Environmental Team shall maintain an MSDS center at each yard with MSDS information for all chemicals used in the operation. The MSDS center shall be at a mutually agreed upon location and available to all employees.

Regulated systems, including petroleum storage tanks, chemical storage areas, industrial wastewater treatment systems and air quality systems shall be operated in compliance with

applicable federal, state, and local regulations. For petroleum storage tanks, these regulations include Spill Prevention, Control, and Countermeasure (SPCC) requirements and the following requirements:

- Permit and performance requirements for new and existing storage areas and systems
- Spill and overfill control requirements
- Release detection requirements for tanks and piping
- Operation and maintenance requirements for corrosion protection systems
- Repair of systems
- Spill response and reporting
- Recordkeeping
- Year-to-come objectives

Quality and Environmental Management Reviews

Both ISO 9001 and ISO 14001 require senior management to review the QMS and the EMS for suitability, adequacy and effectiveness at planned intervals and to order changes as necessary. Therefore, we will hold a management review meeting at least twice a year.

Our General Manager will chair all management review meetings. The managers who directly report to the GM, or their designees, will attend all management review meetings. At the management review meetings, the QHSE Manager will report on the performance of both Quality and Environmental Management Systems, along with the opportunities for improvements and need for changes, to ensure their current suitability and effectiveness in accordance to the requirements of ISO 9001:2008 and ISO 14001:2004. The records of each review will be transmitted to the MBTA as part of the annual report, as well as the relevant plans for improvement.

These reviews will provide the opportunity to examine the results of our efforts to save resources and to assess the suitability of the measures we have taken to prevent pollution and environmental risks. Management reviews will go beyond simply considering environmental performance. They will also consist of an evaluation of the different possibilities for improvement and any potential changes that need to be made, in particular to environmental policy or to the environmental goals or targets. Management reviews will include:

- Progress reports on the Management Plan for Improvement
- The results of installation conformity evaluations
- The results of inspections and audits, where relevant, conducted by third parties
- Information from all interested parties (including complaints)
- Environmental performance
- Reports on the extent to which targets and goals have been met
- Status of remedial and preventive actions
- Follow-up on actions agreed in earlier reviews, including the training and communications aspects
- Any change in circumstance and in the recommendations regarding continual improvement, and any decisions or action relating to possible changes in environmental policy

Remarks, conclusions and recommendations emerging from management reviews will be logged and will, where relevant, be followed by a program of remedial action or of action in anticipation of foreseeable statutory regulations.

The outputs from the management review shall include any decisions and actions related to:

- Improvement of the effectiveness of the QMS and EMS and their processes
- Improvement of products and services related to customer requirements
- Resource needs
- Management Plan for Improvement
- System Performance Assessment

As results of, and inputs to the management reviews, audits are independent methodological examinations to establish whether the processes and the overall quality system are compliant with

the standard. Their scope is variable and should be specified from the outset. They may address the QMS or EMS as a whole or focus on one single aspect of their requirements: compliance with regulations, documentation, traceability of actions and decisions, environmental program, etc.

External audits periodically evaluate compliance with ISO 9001 and ISO 14001 standards. Other audits may be performed to evaluate compliance with applicable law and other requirements. The ISO 9001:2008 and ISO 14001:2004 standards require that every element of the quality and environmental system be internally audited every year. The development of an internal audit system includes the selection and training of auditors, maintaining an internal audit schedule and using a standard operating procedure for management of the internal audits.

Process controls are required for consistency on Operation and Maintenance, Quality & Environment or on Safety / Security issues. A continuously improving and consistent process will produce quality output. Opportunities to apply process control can be found by reviewing local operations. We will therefore implement process control procedures which stipulate operating criteria, and are consistent with the aims of the maintenance processes, as well as our objectives and targets.

ISO 14001 requires the company to identify and plan the operations associated with its significant environmental aspects in order to establish documented operational control procedures that preclude deviation from the Environmental Policy and prevent our not achieving objectives and targets.

Opportunities to apply operational controls can be found by reviewing local operations. Therefore, operational control procedures that are consistent with the aims of the Environmental Policy and the objectives and targets and that stipulate operating criteria will be set up to avoid any deviation.

We will monitor and measure the significant environmental impacts of our maintenance processes and facilities. In practice, measurements will be implemented over all environmental aspects considered significant to the environmental objectives and targets, such as energy use, noise, hazardous materials, solid waste, vehicle use, and atmospheric emissions.

8.B.3. Operational and Financial Reporting — Key Performance Indicators

We also use detailed operational and financial reporting systems, to ensure that we meet our operational targets and that our management of the service is cost-effective. For example, in the VRE service we use a system of operational, organizational and financial Key Performance Indicators (KPIs) which are measured and recorded in real time through our custom-made IT system. All information contained therein is accessible to the agency and informs our weekly, monthly and annual reports. This enables us to monitor our performance in real time, identify trends quickly and continuously work to improve the service by proactively seeking solutions to operational issues. This management tool has led to us achieving record on-time performance in the VRE Service in 2012. The KPIs we measure include the following:

- System OTP %
- System ridership
- Incentives
- Penalties
- Collision with an obstacle
- Collision with another train
- Excess speed
- Stop signal
- Passenger fatality
- Passenger major injury
- Employee fatality
- Employee reportable injury
- Person struck by train
- Fall from train
- Broken wheels and wheel sets
- Other rolling stock damage
- Near miss
- Fire on board
- Derailment

In order to ensure that our businesses are run cost-effectively, we conduct monthly business reviews where each department head of the service reports on the performance of their team. These reviews are held via teleconference with executives from the service, Keolis's relevant country head office, regional management team

and global headquarters. This process allows us to exchange best practice, innovative ideas and solutions to operational or financial issues that our services may face and is a key advantage of being part of an international group focused entirely on public transportation.

8.C. DEMONSTRATION OF ABILITY TO PROVIDE EFFECTIVE EMPLOYEE AND LABOR RELATIONS

Our activities, processes and initiatives for providing effective employee and labor relations, which we describe below, will allow us to:

- Provide a stable management team for the provision of the MBTA Service
- Guarantee customer-focused and high-quality service provision by all our people
- Ensure the Service is always staffed with the right number of qualified, experienced and certified employees

Responsibility for defining, implementing and managing our employee processes and activities will lie with the Human Resources Department as presented below.

In order to streamline all human resources activities and strengthen the training activities, we have decided to change the organization of the team in the following ways:

- We have re-organized the human resources activities into centers of expertise, grouping all activities into benefits, training and advisory services (which include recruitment)
- We have created the new role of Training Manager, to plan, implement and oversee the numerous training initiatives we have identified as necessary to achieve our performance and customer service goals. The Training Manager will be supported by technical trainers in each department, to design and roll out job-specific training
- We have moved the Drug and Alcohol Compliance Manager into the Safety Department, as this role will ensure regulatory compliance and is more suited as part of that team
- We have removed the Peer Counselor Representative whose activities will be taken on by the Employee Assistance Advisor
- We have eliminated the position of Administrative Assistant, whose role will become redundant, due to the improved technical systems support we will introduce

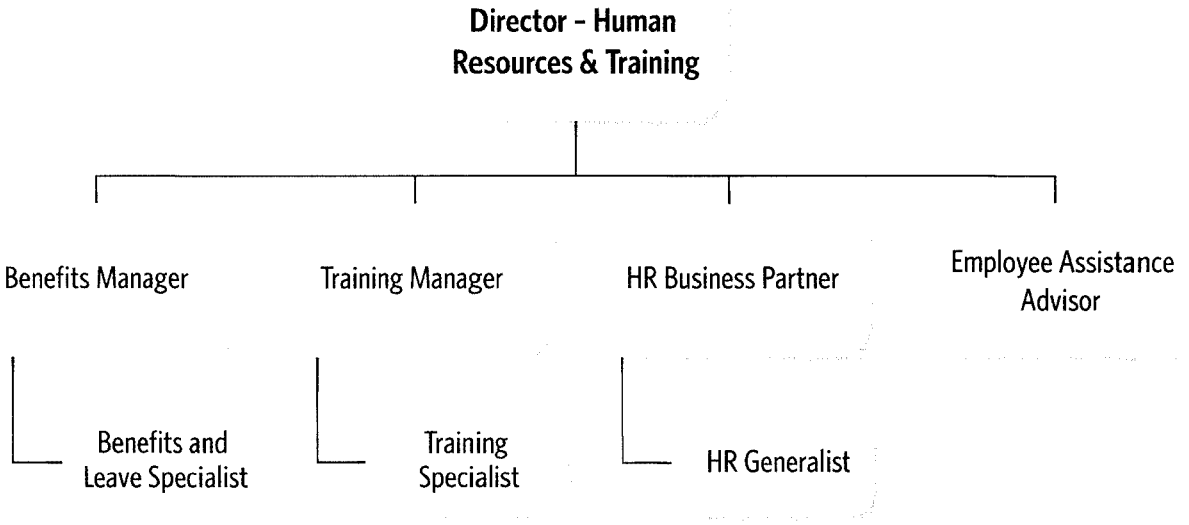


Figure 8-12: Human Resources Department Organization Chart

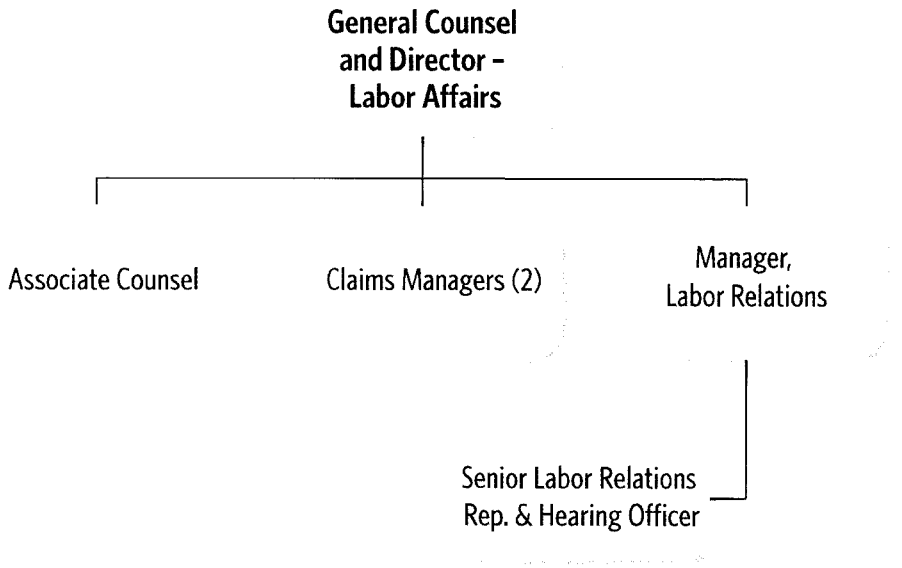

General Counsel and Director - Labor Affairs
Associate Counsel
Claims Managers (2)
Manager, Labor Relations
Senior Labor Relations Rep. & Hearing Officer

Figure 8-13: Legal Department Organization Chart

Our labor relations will be managed as part of the Legal Department, which will not be changed from its current structure as shown next.

8.C.1. A plan for complying with the labor provisions detailed in the Operating Agreement, including Schedules 3.9 and 3.10 and other requirements relating to the existing commuter rail workforce

This section of our Management Plan describes how we will:

- Hire the existing workforce and eligible managers employed by the current operator
- Manage our employees, in order to ensure that we achieve the performance and customer service results we have committed to
- Train our employees to ensure they are qualified and certified competent for their roles

Hiring the existing workforce

In order to comply with the RFP's requirements, we will establish the same number of workforce positions for union staff as were in existence on December 31, 2012, with the current operator:

- Transportation: 624 positions
- Mechanical: 539 positions
- Engineering: 560 positions
- Administration: 76 positions

We will offer eligible union employees positions within our organization in seniority order and will ensure that the organization is fully staffed and functional on Agreement Services Commencement Date. The detailed process we will follow for transitioning existing employees to our organization is described in Section 12 Mobilization Plan.

We will also offer employment to all eligible management employees for at least a four-month probationary period. The process for transferring eligible management employees will follow the same steps as the workforce transition and is included in Section 12 Mobilization Plan. We will implement the organizational changes we are proposing within management as soon as possible after the Commencement Date, and we will use the four-month probationary period to validate our assumptions about the existing organization and its processes; assess the skills, experience and attitudes of each management

employee; and identify the appropriate roles for them in the new organization.

We will submit weekly reports to the MBTA outlining the status and progress of the hiring process, and we will pay special attention to the key operational roles that must be staffed to ensure the safe performance of contract services. To mitigate this risk, we will require employees to accept or decline our employment offer early during Mobilization, so that we may begin external recruitment efforts as soon as possible. We consider all positions with safety responsibilities to be operationally critical.

For positions that cannot be filled from the existing workforce, we will use the best-practice recruitment process described below, which we will also use to recruit to any vacancies throughout the life of the contract. This process has been designed to ensure that we employ individuals with the right skills and attitudes for the job at all levels of the organization and maximize the performance of our operations by filling vacancies in the shortest possible time.

Our recruitment for the MBTA Service will focus on assessing candidates' attitude toward performance and customer focus in all roles. In selecting our senior management candidates, we have ensured that customer service attributes were effectively assessed, and we will extend this approach to all vacancies that we will fill in the new organization. By selecting only candidates who successfully display the attitude toward performance and customer focus we require, we will ensure that all recruitment activities support our objective of creating a performance-focused and customer-focused culture.

In our experience, it is most cost-effective to recruit operating and maintenance staff who already have at least part of the required qualifications. For locomotive engineers and conductors, we will be looking for prior experience, qualifications and certifications, as required. In other cases, such as for an assistant conductor, we will consider hiring an individual who is not qualified, if there are no experienced applicants, and training that individual in the duties and responsibilities of their new job.

Managing our employees

We recognize that our operations cannot function successfully, and achieve the performance and customer service results we have committed to, without a motivated, engaged and committed workforce. In addition to complying fully with the labor provisions detailed in the RFP, we will therefore increase employee engagement and motivation, and change the culture of the organization to be performance-focused and customer-focused.

Employee engagement and motivation

We consider that employee engagement and motivation are a key first step in improving customer service for our passengers. We will ensure that passengers on our trains experience world-class customer service and high-quality transportation. We have achieved this on the VRE Service, where the passenger response to our train crews has been overwhelmingly positive. This is evidenced by the 90% customer satisfaction rating achieved by our on train personnel in the 2012 VRE Agency annual customer service survey. This was an increase of over 5% from the previous survey and the highest rating for VRE operating crews in the more than 20-year history of the service.

A good commuter rail service has a considerable degree of routine associated with it. When the service is running properly, the same crews are working on the same trains operating on the same schedule every day. It is essential for the service to be as reliable and as consistent as it can be. Yet, within this routine, the train and engine crews cannot become bored and inattentive. They must remain focused, motivated and attentive so that we can all be **Moving Further Together**.

We will improve employee engagement and motivation by:

- **Ensuring clarity of roles and responsibilities:** The basis of having an engaged workforce is ensuring that everybody knows their role and responsibilities and how these fit into the

bigger picture of what the company is trying to achieve. We will ensure that, in addition to having job descriptions which clarify roles and reporting structures, as well as expectations about their job performance, employees understand how their actions affect the quality of our customers' experience.

- **Breaking down silos and creating a sense of common purpose:** Our key management team will communicate with all levels of the organization on a regular basis. In addition to riding the trains and being visible to employees through the mandatory train riding program described in Section 6 Transportation Services Plan, managers will keep everybody informed on how the company is performing, including the level of on-time performance achieved and the feedback received from customers. In VRE, this communication takes the form of regular email updates and newsletters to all staff, in addition to the formal and informal face-to-face meetings with staff. Managers explain the part every employee played in our success and thank them for it. This creates interest in the activities of other parts of the organization, breaking down silos and creating a common sense of purpose.
- **Making management approachable and available:** It is the job of the management team to be very involved in the daily operation of the service, riding trains, talking to the crew members, listening to their concerns and their issues and responding wherever and whenever necessary. Certainly, part of this involvement will be in the conduct of our Program of Operational Tests and Inspections, as mandated by 49 CFR Part 217. But management presence on the trains and in the field needs to be more than that. Our management team will work to support and reinforce the efforts of our train and engine crews as much as possible, starting with participating in on-board management workshops. This will develop a true team approach among all of our operational personnel.
- **Seeking employees' input and ideas for innovative improvement initiatives:** We will encourage employees to come up with innovative initiatives to improve the performance and customer service we provide to the MBTA and our passengers. Individual ideas will be assessed for their feasibility by managers, and the employees whose initiatives are implemented will be entered into an annual prize drawing. Encouraging employees to take responsibility for their roles and influence the way we work has the advantage of improving our employees' engagement and facilitating the implementation of improvement initiatives. As ideas come from the rank and file, staff are more likely to buy into the change, rather than oppose it. This approach also helps to break down the division between staff and management, which so often acts as an inhibitor to change.
- **Holding annual development reviews with all staff:** In our experience having an opportunity to discuss development possibilities with their managers vastly improves employees' engagement. Ensuring that all our employees discuss their career development and training needs with their manager at least once per year is a core part of changing the corporate culture to fit our emphasis on customer service and performance. It will also allow us to cascade our vision of **Moving Further Together** and ensure that every employee hears about the goals of the company and learns how each department and individual contributes to our success. We will include training on how to hold development reviews in our management training for all management staff, including first-line managers and supervisors.
- **Promoting from within to provide opportunities for career advancement:** When vacancies are confirmed, we will recruit from within the business, wherever possible, by advertising all roles internally first. Promoting from within allows us to retain our highly skilled and best-performing employees by giving them an opportunity to develop. If no internal candidates are available, or they do not demonstrate the required competencies

and behaviors for the role, we will resort to external recruitment.

- **Asking staff about their opinions in bi-annual staff satisfaction surveys:** We will implement a bi-annual staff satisfaction survey to ensure that our initiatives for improving staff engagement and motivation are working. The survey will gauge employees' opinions on a variety of topics related to engagement and motivation which will be determined by the Director - Human Resources and Training. The management team will be responsible for analyzing the results and implementing changes as necessary to improve the level of staff satisfaction.

Another very important element of our overall employee motivation program is management training. We recognize the importance of managers' skills in motivating and engaging employees to reach their full potential. We will therefore review all of the current operator's management training activities, implement training for first-line managers in order to improve their management skills, and introduce leadership training for senior managers. These are described in detail later in the section.

Changing the Culture of the Organization

Organizational culture describes the attitudes, experiences, beliefs and values of an organization. These determine the way in which "things are done around here" and therefore control the way people interact with each other and with stakeholders outside the organization. In order to deliver excellent performance and customer service for the MBTA and its passengers, we will make customer focus a central part of our organization's culture.

In order to deliver our vision of **Moving Further Together** with the MBTA, we will focus all business and HR processes on achieving improvements in performance and customer service. As the diagram below shows, all HR initiatives and processes — from the design of our organization structure, the content of job roles, the processes we adopt for recruitment, the skills and behaviors we focus training investment on, our approach to performance management and the actions and behaviors we choose to reward and recognize — will work towards the creation of a performance-focused and customer-focused culture.

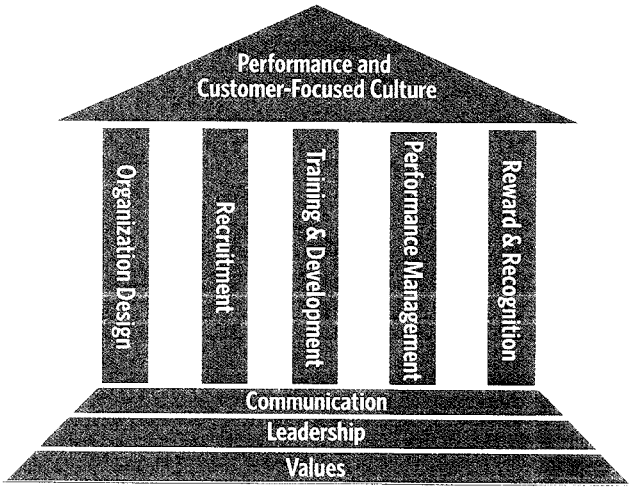


Figure 8-14: Performance and Customer-Focused Culture

Values, leadership and communication form the foundation of the model, as in order to achieve a performance-focused and customer-focused culture the organization must have:

- A clearly defined set of customer focused values
- Leaders who can inspire and engage staff as well as act as role models for the performance-focused and customer-focused culture that the company is working toward, starting with empowering the local GM.
- Substantial and continuous communication mechanisms in place which provide bottom-up as well as top-down feedback loops

Our approach to the pillars of organization and job design and recruitment are set out earlier in this Section. The remaining pillars of the model — training and development, performance management, and reward and recognition — are explained below.

Performance Management

In order to make the performance-focused and customer-focused culture real, employees must be given clear performance and customer service goals, as well as guidelines on conduct and measurement criteria for each area; and they must be held accountable. We will therefore implement a formal performance management process, with customer service at its core, for all staff. The process will allow for poor performance and conduct unbecoming an employee to be dealt with quickly and effectively and ensure that excellent performance is adequately recognized. In addition to supporting improvement in the Service's customer satisfaction ratings, this will increase staff engagement and satisfaction, thereby reducing turnover costs and contributing to increased ridership.

Managers will assess each employee's performance against the requirements of their role, as well as the key behaviors and characteristics we want all our staff to display. These will be finalized by the our key managers during Mobilization, as detailed in Section 12 Mobilization Plan, and will follow our core themes:

- **Moving Further Together**
- **Think Like a Passenger**
- **Quality**
- **Transparency**

Once the specific behaviors have been defined and examples attributed to each, the Director - Human Resources and Training will develop the appraisal form that we will use for the MBTA Service. The form shown on the next page is an example of an annual performance review at our light rail operation in Australia, Yarra Trams.

The performance management process for frontline staff will be designed within the first six months of the operational phase of the contract. It will be based on the customer service behaviors that we have already identified and which will be finalized during Mobilization, as well as a set of role-specific competencies, and will be rolled out throughout the business by December 2014. The performance and development review will cover past performance and behavior, set future individual and team objectives and will include a review of training attended and potential future learning activities. Performance and development reviews will be undertaken annually by line managers and will inform promotions and the succession planning cycle. The process will ensure that everyone knows what good customer service looks like and receives regular, constructive feedback on their performance against that standard. Individuals will be measured not only against their actions, but also against how they achieve those outcomes, thereby increasing the understanding that their behavior is equally important as their ability to get the job done and will be given equal weighting in the assessment of their performance.

All managers with line management responsibilities will receive training on how to hold performance and development reviews with their staff within the first year of the operational phase of the new contract.

Reward and Recognition

In the MBTA Service, we will provide a Staff Excellence recognition program. It will recognize and reward people who have demonstrated excellent customer service and gone above and beyond what is expected of them in their normal role.

We will also emphasize the importance of managers creating an environment where great performance is openly and explicitly celebrated and valued by using more informal, quick ways to recognize performance. Depending on the individual circumstances, managers will be encouraged to consider initiatives such as:

- Making a point of thanking high-performing individuals and telling them they're doing a good job

h401fo0001 Issue 1

yarra trams

EMPLOYEE WORK PERFORMANCE ASSESSMENT SHEET (PRIVATE & CONFIDENTIAL)

Employee Name: Fred Flintstone **Employee Number:** 123456 **Date of Hire:** 20 / 03 / 1995

Current Position/Classification: Tram Driver **Work Location:** Malvern **Years in Current Position**15.2yrs

Criteria	Examples	Past Twelve Months Performance		Supporting Comments
		Category	Total	
Attendance	Number of sick leave absences with and without certificates, late reports, fail to report. *Note: employees with a total of 7 or more day's absence in the previous 12 months will not be considered unless there are extenuating circumstances detailed in the comments column.*	Sick Leave without Certificate	Nil	
		Sick Leave with Certificate	Nil	
		Late Reports	Nil	
		Fail to Report	Nil	
Incident Record	Tram to tram and Tram to vehicle accidents, derailments, early and late running, passenger falls.	Tram to Tram	Nil	
		Tram to Vehicle	Nil	
		Derailments	Nil	
		Passenger Falls	X2	
		Other		
OPR Irregularities	On Road Performance	Picking up Late	Nil	
		Running Out Late	Nil	
		Departing Terminus Late	Nil	
		Early Running	Nil	
Customer Service Record	Customer Complaints & Commendations. *Note: supporting information must be provided in the comments column.*	Announcements	Nil	Minor complaint
		Complaints	1	
		Commendations		
Disciplinary Record	Counselling sessions, Warnings, Panels. *Note: supporting information must be provided in the comments column.*	Counselling	Nil	
		Warnings	Nil	
		Final Warning	Nil	
		Disciplinary Panels	Nil	
Fitness for Duty	Number of Workcover claims, light duties, restricted duties (number of and nature of claims must be detailed in the comments column).	Workcover Claims	Nil	
		Light Duties	Nil	
		Restricted Duties	Nil	
		Current physical/medical restriction		
Personal Presentation and Grooming	Please tick appropriate box	Excellent	X	
		Good		
		Average		
		Poor		
Performance in current Position	Valuable member of Malvern depot - has done extremely well over the past 12 months			

Managers Recommendation: (recommended/not recommended for interview consideration/transfer/promotion)
Recommended

Assessment completed by (Print Name): Vic Foudoulis **Signature:**_____ **Date:** 17/5/10

Figure 8-15: Yarra Trams Appraisal Form

- Publicizing individual achievements via team briefings, newsletters, etc
- Arranging for the relevant Senior Manager to send a message of recognition and thanks
- Providing opportunities where the individual can share their approach to customer service with the rest of the team
- Providing opportunities for the individual to utilize their skills outside their day-to-day job
- Offering opportunities for further training and career development

Training and Development

As described in Section 12 Mobilization Plan, we will develop the complete KCS Annual Training Program Plan for all our employees in the MBTA Service during the first 120 days of Mobilization, and submit it to the MBTA for approval, including but not limited to the *training allowance* we have set aside for each employee. Our plan will address all required aspects of safety and relevant personnel qualifications, including the requirements of the MBTA and the FRA; will identify all legally required and discretionary training; and will include a schedule for each class, the instructor's name, number of seats, course syllabus, competency test questions requirements for passing the course and associated teaching materials. Throughout the contract term, the Training Manager will work with the Directors in every area of the business to update the plan as necessary and/or as any laws or regulations change or other circumstances occur that require an update. The Training

Program Plan will undergo a complete review at least annually and will be submitted to the MBTA for approval every year.

We will take several factors into consideration in developing this program, including the following:

- We will coordinate all training activities to ensure there is no disruption to the service
- At no time will the training sessions interfere with the staffing requirements of the MBTA
- We will make available to MBTA 10% of the slots for any of the scheduled training programs
- Upon MBTA's request and after discussion between us and the MBTA staff, we will modify the training programs
- We will provide to MBTA a monthly report of training completed, which will list and describe all training conducted during the preceding month. The report will include the courses completed, number of hours of training completed by each employee, the names of each employee and the test results
- We will maintain and have available for inspection by MBTA and regulatory agencies having jurisdiction, records pertaining to employee training, including syllabi, records of qualifications, certifications and grades

We measure our employees' knowledge and competencies against those required by their role:

- Initially as part of recruitment and selection
- Continuously at performance and development reviews
- In investigations into incidents and near misses
- By encouraging managers and staff to identify additional training needs

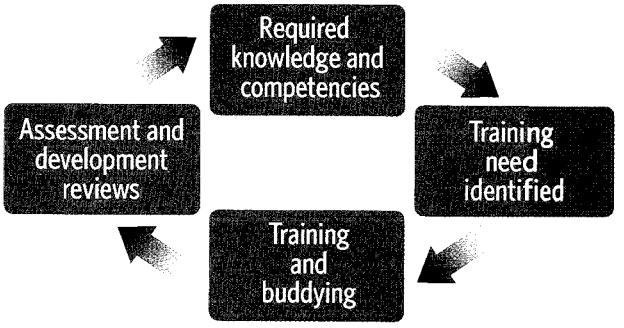


Figure 8-16: Knowledge and Competency Process

Where staff do not have the competencies required for their role, we will ensure they have the opportunity to obtain them through training and partnering, while keeping track of progress through development reviews. Our process for developing our people's knowledge and competencies is shown here.

Managers, qualified assessors and staff in our railroad operations work together to ensure competencies are sustained. Safety-critical competencies are attained for fixed periods of time, and are subject to periodic assessment. Assessors and managers update employees' knowledge through briefings or one-on-one training, depending on the importance of the task.

As described above, we use a formal performance management process for any employee who is struggling to achieve the required standards in any element of their work. The process not only helps managers encourage staff to develop but also gives staff the opportunity to understand exactly what they need to do to meet the required standard and obtain the necessary training.

All our training programs are designed to make employees knowledgeable of the safe work practices required for their position — all the way from the senior managers to the workforce. It is the intent of the program to provide all the necessary skills required to achieve success. We understand that people learn in different manners and time periods. As such, the programs are developed to provide an equal opportunity for success for all employees regardless of their learning capabilities.

However, it is a fact that not every employee will have the ability to pass the required training, exams and certifications required for their positions. We and our subcontractors will provide employees who struggle with the training and certification requirements sufficient opportunity to successfully pass the training. If it is determined that, regardless of opportunity, an employee will not be able to pass or maintain a particular set of qualifications, then that person will be removed from their position and placed in a situation that is suited to their skills and abilities. Under no circumstances will employees be allowed to remain in a position they are not fully qualified or certified to do. The training programs will include regular refresher training and skills testing, certification, and training for promotion.

All training programs will be in accordance with any labor agreements that are in effect. The training program described above will be consistent with and will be a demonstration of our commitment to the MBTA Service.

After carefully considering an investment in expanded training facilities on our part, we concluded that the vast real estate program that such a program would entail would primarily benefit KCS, a private sector company. Consequently, we have determined that the better choice for all would be to involve elements of the community in our training program and open it to other MBTA employees. By doing so, the training team that we are proposing for the MBTA Service will be more local, more diverse and more a part of the community that we will be serving. This is an extremely important concept to us.

Supervisor and Management Training

We have ambitious programs to deliver throughout the life of the contract, including the **cultural change** within the organization and the introduction of new quality standards. We believe it is critical therefore, that managers demonstrate their ability and willingness to embrace the new strategic direction so that they can successfully lead these changes. They will do this by providing clear direction and focus, and engaging with their people so that they are motivated to deliver our business performance priorities and a customer-focused culture. We will ensure that leaders are given the support and the skills they need to implement these changes successfully, by reinforcing management training for supervisors and more senior managers.

In order to improve the quality of management, we will invest in supervisor training for all existing and new team leaders and first-line managers. Our supervisor training will be based on competencies that managers must possess to be successful in their roles, including Leadership, Employee Engagement, Communication, Change Management and Performance Management. This training will use personality tests, such as the Myers-Briggs typology, in order to help managers assess their own management style and assess their interaction with others. The content of the training course will be designed by the Keolis America Human Resources Manager during Mobilization and will include as a minimum:

- Living our vision: **Moving Further Together**
- The MBTA contract and our commitments
- Supervisor and first line manager responsibilities
- Holding annual performance and development reviews
- Managing employee performance
- Drug and alcohol testing

We will use the new leadership skills and behaviors described above to introduce senior management or leadership training as part of our cultural transformation. The leadership training will build on information on managers' skills and behaviors gathered throughout the four-month probationary period and develop those areas where opportunities for improvement have been identified. Managers whose skills and behaviors have not been assessed prior to the training course, because they are new to their roles, will be assessed as part of the training course. The content of the senior management training course will be developed by the Keolis America

Human Resources Manager during Mobilization and will include as a minimum:

- Living our vision: **Moving Further Together**
- The MBTA contract and our performance commitments
- Leadership skills and behaviors
- How to inspire and motivate people
- Our performance and customer focused culture
- Performance and development reviews and managing employee performance

New Hire Training

Building a solid base of knowledge is vital to the long-term success and productivity of an employee, and new hire training is crucial in instilling the values and behaviors we want to base our performance - and customer focused culture - on. As explained in Section 12 Mobilization Plan, we will provide new hire orientation to all employees preparing for the MBTA Service during the Mobilization Phase. We will use the orientation detailed in Section 12 as a basis for developing the new hire training that we will give to all new employees who enter the organization throughout the life of the contract.

Measuring the Effectiveness of Training and Reviewing the Training Program Plan

We monitor the number of employee training days, as well as the timely completion of annual refresher training to ensure our staff maintain relevant competencies and have the skills they need to help achieve the company objectives. The effectiveness of our training is measured through analyzing training session feedback and by monitoring course pass rates. Ultimately, the effectiveness of our training shows in our customer service and operational results.

Job-Specific Technical Training

We will implement job-specific technical training courses in each functional area of the organization, which are detailed in the following Sections:

Training	Section Reference
Safety and Security Training	Sections 2 and 3
Equipment and Facility Training	Section 4
Engineering Training	Section 5
Train Operations Training	Section 6
Customer Service Training	Section 7
Information Technology Training	Section 9

Our approach to training encompasses our entire workforce management and unionized employees, our commitment to them is to:

- Provide a comprehensive range of first-class training courses to enable them to better themselves and better perform their jobs
- Make sure they have the time to attend these courses
- Invest the financial resourses necessary (on average $400 to $800 per employee per year) to make the training effective

8.C.2. History of Positive Working Relationships and Harmony with Employees and their Representatives

We have a long history of positive working relationships and harmony with employees and their representatives. In Germany and France alone, Keolis has almost 27,000 unionized employees represented by 11 labor unions and working under labor laws that make it much easier to strike than it is working under the U.S. Railway Labor Act. Similarly, SNCF has almost 120,000 unionized employees represented by 4 labor unions and in 2011.

In our experience, this kind of success in creating positive working relationships and harmony with employees and their representatives is based on:

- Creating a spirit of **partnership**, in line with **Moving Further Together**, based on working towards common goals
- Negotiating **fair collective bargaining agreements** which share both the responsibilities and benefits related to the provision of the service

- **Continuing communication** with individual employees and their representatives

This approach has enabled us to forge positive relationships with the United Transportation Union Sheet Metal, Air, Rail and Transportation Workers (UTU-SMART) which represents our employees at VRE. Our relationship with the union has supported the achievements of the service, and the relationships which have been forged there are recognized as being among the best in the industry. This can be clearly evidenced in many ways, including but not limited to:

- **Our ability to secure long-term collective bargaining agreements:** Our most recent 3-year agreement was embraced by 78 percent of the workforce
- **Improving levels of employee communications:** Our employees receive regular updates on the service, including maintenance of equipment and transportation, as well as customer feedback, so that they recognize their role in the entire organization, understand the impact their actions have on our passengers, and **Think Like a Passenger** in everything they do
- **Maintaining positive relationships with union officials at all levels:** At the VRE Service, we engage regularly with union officials working on the property, and ensure we keep regular contact with their national counterparts. Feedback from individuals has been overwhelmingly positive

There are 13 unions represented at the MBTA Service, and the current operator has negotiated similar agreements with all of them, using "coalition bargaining". In 2011, negotiations were prolonged and the TCU / IAM reported "a fierce campaign to derail TCU and every other union's efforts to ratify the contracts (...) [as well as] a nasty and often dishonest disinformation campaign".

Our strategy regarding labor relations for the MBTA Service will focus on:

- Recognizing the unions that are present on the property today
- Signing implementing agreements with each union before Commencement Date
- Working with the Unions to improve employee training, motivation and engagement, for example, by using the United Transportation Union Sheet Metal, Air, Rail and Transportation Workers (UTU-SMART) training facilities
- Applying the same conditions to members of each union, in order to limit the internal strife that can characterize relationships between unions, and to bring our employees **Moving Further Together**, creating a team feeling and a sense of common purpose

We have already met with the representatives of all unions at the MBTA Service, to introduce Keolis, SNCF, and our philosophy. This informational meeting was a great success with 20 representatives from all unions on the property attending the event. After a safety briefing and a presentation of our activities around the world and in the U.S., the main areas of discussion were around:

- **Our willingness to recognize and work with the Unions:** Representatives questioned the fact that the shop crafts at the VRE operation are not organized. Our managers explained that this was due to the fact that maintenance activities had been subcontracted by Amtrak and that we took the existing subcontract over when we won the contract. The employees of the subcontractor are not currently organized, but Keolis is not anti-union and will recognize all existing unions at the MBTA, if successful.
- **Our ability to deal with complex labor relations and several unions:** Representatives questioned our ability to manage complex labor relations, as we only have an agreement with one union in the U.S. We explained that we deal with unions throughout the world and that our managers are used to the very complex labor relations environments of Europe. We stated that our approach is to work in partnership with the unions, to achieve our common goal of providing transportation to the local communities.
- **Our management and identity as a foreign company:** Representatives seemed concerned about the fact that we began as a French

company. We explained our structure and that all our activities in North America are overseen from the U.S. headquarters in Rockville, MD. We made it clear that we already have an office in Boston and that the contract would be managed locally, with the GM and the senior management team being fully responsible for all aspects of the contract.

- **Our ability to manage a large commuter rail network, such as the MBTA's:** Representatives asked about our experience in managing large rail networks, as our only rail activity in the U.S. is the operation and maintenance of the VRE, which is not comparable in size to the MBTA network. We explained that we have other large operations around the world, such as the largest streetcar / light rail network of the world in Melbourne. We also manage the entire transportation solutions in several cities in France, including buses, light rail, metro and trolley buses. We also emphasized that SNCF, our major shareholder and partner in this procurement, operates and maintains all rail operations in France, which vastly exceeds the size of the MBTA Service.
- **Our experience in Engineering Services:** Representatives asked about Keolis' experience in maintaining the infrastructure in other parts of the world, as this is not part of our responsibilities in Virginia. We explained that SNCF, our major shareholder, maintains all railroad infrastructure in France's vast rail network.
- **Our approach to wage increases:** Representatives were concerned about how we would price the proposal and which wage increases we are assuming, given the length of the contract. We confirmed that we would negotiate with all unions and explained that our philosophy is not to squeeze labor in order to increase our profit but rather to share success with our employees and our clients.
- **Our intention for providing benefits:** We confirmed that we would provide substantially equivalent benefits. Our employees in VRE have been very happy with the benefits that we have provided there. Our actions and initiatives for managing labor relations as part of the MBTA Service include:
- **Negotiating collective bargaining agreements during Mobilization:** As further detailed in Section 12 Mobilization Plan, we have a very good relationship with unions in the VRE operation. It is therefore our intention to continue our discussions with the representatives for the MBTA Service early in Mobilization, to negotiate collective bargaining agreements with them. While we do not currently have agreements with any of the "shopcraft" unions, we have an experienced and respected negotiating team who have already met with these unions and try to come to similar accords to govern those workers who we will employ to maintain. Holding regular meetings and discussions with union representatives: Our existing partnership strategy with the unions is based on a "no surprises" approach which works both ways. The collective bargaining arrangements and consultative structures ensure that both business issues and union concerns are raised at the earliest opportunity and at appropriate levels to allow them to be dealt with swiftly. A formal structure of quarterly scheduled meetings facilitates this approach and supports strong working relationships between managers and union representatives throughout the business. The partnership principle is fully supported and embedded on both sides and at all levels, with local representatives better understanding the importance of their role in ensuring that the arrangements work effectively to benefit employees, passengers and the achievement of business goals.
- **Ensuring managers can build positive relationships with individual employees:** A complementary employee relations strategy provides a framework, skills and tools for local managers which encourage them to build positive relationships with individual employees and endorse our change management philosophy. This is achieved by ensuring that employees know what is expected of them, employees have the tools to do their jobs effectively, employees feel

that someone within the business is looking after their development, employees feel empowered to provide good internal and external customer service; there is a strong focus on excellent employee communications and that individual employee contributions are recognized. We will utilize a partnership approach to relations with unions to facilitate mutuality of interest. Our overall aim is to develop a business-oriented relationship with each partner jointly working to deliver organizational success and fulfill the MBTA Service standards. The specific objectives of this approach are to deliver sustained labor harmony, greater organizational and service flexibility, enhanced productivity, lower costs and increased employee engagement.

- **Keeping an open dialogue and increasing staff engagement:** We will develop an open dialogue at all levels with the unions and at the same time proactively manage direct communications with employees, leveraging value from the continually improving culture of individual staff engagement.

We will also adopt a proactive approach to further developing good employee relations by focusing heavily on engaging and involving each employee in the overall attainment of service and business goals, as well as strengthening internal communications through more frequent, regular and open communications as part of our change management philosophy.

The status of the relationship with the unions will be reviewed annually as part of the HR strategy review and preparation for business planning cycles. Progress will then be monitored monthly within HR and quarterly meetings will be held with union representatives to consider outstanding issues and deal with any issues in the relationships.

8.C.3. Compliance with prevailing wage statutes

Wherever we provide services around the world, we comply with all governing prevailing wage statutes and levels. We will act accordingly and will, at all times, pay the agreed-upon wages to its employees engaged in the provision of the MBTA Service. We have a labor-friendly approach in the U.S. and abroad. This approach has translated to success in negotiating change without disruptive labor disputes that interrupt the delivery of service. We also have a strong track record of working with our clients to ensure that any changes in labor practices are beneficial in the long term. This is particularly important in heavily unionized contracts.

It is important to note that negotiating these changes is dependent on creating a trusting, open and constructive labor relations environment. This is achieved through a well-considered and collaborative Mobilization and a well-structured process of employee engagement.

Our approach to labor management partnership is to leverage the existing elected employee delegates for the MBTA Service to build a relationship. We will establish regular meetings to manage labor issues.

8.C.4. History of administration and application of collective bargaining agreements and adherence to applicable labor laws

Our considerable experience in successfully negotiating labor agreements, adhering to applicable labor laws and maintaining harmonious relationships with the labor organizations representing our thousands of employees around the world is described earlier in this Plan. SNCF has negotiated, administered and adhered to bargaining agreements across all its operations in France and has almost 120,000 unionized employees working under labor laws that make it much easier to strike than it is working under the U.S. Railway Labor Act. Keolis currently has 11 unions it negotiates with in its railroad operations in the U.K. and Germany.

We base our approach to managing the relationship with the unions on **fairness**, open and honest **communications**, and creating a **partnership** by working towards the same goals. We have found that including the unions in our business initiatives by consulting them to find

ways to improve performance and customer service is a good way to break down the "them and us" culture that is often prevalent in union relations. At all our operations we treat our employees with dignity and respect and provide them with the tools to do their jobs. They have responded in kind and the customer service and customer satisfaction aspects of our operations, such as the VRE Service, have been overwhelmingly positive.

In administering and applying collective bargaining agreements, we always comply with the local labor laws; ensure that union staff know and understand the priorities and goals of the company, and are aware of our results and performance; negotiate fair wage increases; and adhere to collective bargaining agreements once they have been implemented.

At VRE, all employees receive regular updates on our on-time performance and customer satisfaction results. Our employees learn from each other and the situations their colleagues have faced, and can continuously improve the customer service they provide. We agree to fair wage increases, which share the increase that we receive from our client with our employees who provide the service. Finally, we apply the collective bargaining agreements once they have been agreed to. Our relationship of trust with the unions is demonstrated by the fact that we agreed on a collective bargaining agreement with the BLE at the VRE in 2010 and have abided by its terms, despite the fact that the agreement was never signed by the union. There have been no grievances raised by employees at the VRE and no instances of workforce strike. Recently, members of the UTU-SMART ratified a new three-year agreement to continue service with VRE.

The current operator has renegotiated the wage and benefit terms of all its bargaining agreements. We will establish the same jobs that the current operator has on December 31, 2012, will offer employment to all current unionized employees in seniority order, and will hire all management employees for a least 4 months at their existing wages and benefits. We will commence negotiations for new agreements within 10 days from receiving NTP and will ensure that implementing agreements with the unions are in place before the start of operations. We will maintain the same wages, substantially equivalent benefits and existing seniority rosters.

Because we will employ this strategy, we do not expect any labor strife arising out of our operation of the MBTA Service. We will offer the same wages and benefits, and the prospect of continued employment in MBTA Service and we therefore do not expect the MBCR employees to be seriously concerned. We anticipate that the transition to employment with us will be seamless.

Once we have new agreements in place with the labor unions representing our workforce, these employees will be covered by the Railway Labor Act, which prescribes a very lengthy process before any sort of job action could affect the MBTA Service. The combination of fair, comparable wages and benefits, inclusion in the railroad retirement system, and an experienced management team that will be respectful of our workforce, will all work to prevent any job actions affecting the MBTA Service on the part of our employees.

8.D. BEST PRACTICES SUPPORT

Our initiatives for managing the MBTA Service have been described in detail in this Plan, and are summarized in the table below.

As the table above shows, our initiatives for managing the MBTA Service are innovative, best practice, beneficial to MBTA customers and cost-efficient. We have based our organizational design on the requirements of the RFP, industry best practice and our experience of operating services similar in size and complexity to the MBTA Service. We have reinforced strategically important areas of the service, such as Quality and Environmental Services, IT and the Management of the contract, with the creation of new Director-level positions. This will allow us to manage our business processes and our people in a more effective way, providing better quality service to the MBTA's customers — our passengers — and the MBTA itself.

Our business and operational processes, including the materials management processes, quality and environmental management systems and monitoring of key performance indicators (KPIs), will allow us to ensure that the provision of services is effective and cost-efficient to the MBTA. We will make all our operational KPIs, reporting and any other information relevant to the service, available to the MBTA, to ensure that we are totally transparent in our activities and constantly **Moving Further Together** with the MBTA.

In hiring the existing workforce and management, we will comply with the RFP in every aspect, while ensuring that managers who join our team have the competencies and leadership needed, to support the performance-focused and customer-focused culture we want to build. All our human resources management processes, such as performance and development reviews, reward and recognition including staff awards, will be focused on supporting our performance and customer focused culture. This is a best-practice and cost-efficient way of ensuring that we continuously improve the service that our passengers and the MBTA's customers experience. Similarly, our initiatives for improving employee engagement and motivation will lead to better customer service, as our staff are motivated to go the extra mile for our passengers.

Our initiatives within training include partnering with local community colleges to provide learning and development opportunities for our staff. We will also invest in supervisor and management training, to ensure that our managers are properly equipped to lead and inspire the workforce.

Management Opportunity Initiatives

Area	Initiative	Innovative	Best Practice	Beneficial to MBTA Customers	Cost Efficient	Support
Organization design	Experienced, qualified, dedicated and local key management team		✓	✓	✓	8.A
	Creation of new positions: Deputy GM, Chief Information Officer, Director – Quality and Environmental Services	✓	✓	✓		8.A
	Elimination of the position of Director of Strategic Planning and Chief of Staff	✓	✓	✓	✓	8.A
	Creation of part-time position of Security Liaison to the MBTA Police Department	✓	✓	✓	✓	8.A
Business and operational processes	IT based Materials Management and Procurement Services managed in the Finance and Administration department	✓	✓	✓	✓	8.B
	Quality Assurance and Management System, including ISO 9001	✓	✓	✓	✓	8.B
	Environmental Management system, including ISO 14001	✓	✓	✓	✓	8.B
	Operational and financial reporting (KPIs)	✓	✓	✓	✓	8.B

Management Opportunity Initiatives						
Area	Initiative	Innovative	Best Practice	Beneficial to MBTA Customers	Cost Efficient	Support
Hiring the existing workforce	Establishing all workforce positions in existence on December 31, 2012		✓	✓	✓	8.C.1
	Employing all eligible managers for a 4 month probationary period		✓	✓	✓	8.C.1
	Defining and assessing management against our leadership behaviors	✓	✓	✓		8.C.1
Employee engagement and motivation	Ensuring clarity of roles and responsibilities	✓	✓	✓		8.C.1 (p. 8-49)
	Breaking down silos		✓	✓	✓	8.C.1 (p. 8-49)
	Making management approachable	✓	✓	✓	✓	8.C.1 (p. 8-49)
	Seeking employees' input and ideas	✓	✓	✓	✓	8.C.1 (p. 8-49)
	Annual performance and development reviews	✓	✓	✓	✓	8.C.1 (p. 8-49)
	Promoting from within	✓	✓	✓	✓	8.C.1 (p. 8-49)
	Holding bi-annual staff surveys	✓	✓	✓		8.C.1 (p. 8-49)
Culture change	Performance and development reviews	✓	✓	✓	✓	8.C.1
	Staff awards	✓	✓	✓	✓	(p. 8-50)
	Coaching programs	✓	✓		✓	(p. 8-51)
Training and development	Partnering with local community colleges	✓	✓	✓	✓	(p. 8-54)
	Opening new training programs to the MBTA Employees	✓	✓	✓	✓	(p. 8-54)
	Supervisor and management training	✓	✓	✓	✓	(p. 8-54)
	New hire training	✓	✓	✓		(p. 8-55)
	Job-specific training		✓	✓	✓	(p. 8-55)
	Training allowance	✓	✓		✓	(p. 8-52)
	Deployment of certain innovations and best practices at our own cost	✓	✓		✓	(p. 8-7)

SECTION 9
Information Technology Services Plan Evaluation Factor Information

SECTION 9 — INFORMATION TECHNOLOGY EVALUATION FACTOR INFORMATION

Contents

9. INTRODUCTION 2
I. Executive Summary 2
II. The MBTA's Objectives as We Understand Them 2
III. Our Assessment of the Current Situation 4
IV. The Results We Will Deliver 5
9.A. INFORMATION TECHNOLOGY SERVICES PLAN 6
9.A.1. Delivering Application and Data Interfaces 20
9.A.2. Maintaining Source Code Escrow 20
9.A.3. Sustaining and/or Transitioning the Existing IT Environment During Mobilization 21
9.A.4. Replacing, Upgrading IT Systems to Keep the Same in a State of Good Repair 24
9.A.5. Tracking and Escalating Issues 24
9.A.6. Understanding and Utilizing New Technologies Such as RFID (Radio Frequency Identification) 25
9.A.7. Documenting the IT Environment 26
9.A.8. Managing an IT Organization and Staff 27
9.A.9. Conducting Regular Reviews and Meetings with the MBTA 30
9.A.10. Complying with MBTA and Other Applicable Standards 31
9.A.11. Applying Sound Change Management, Project Management, and Configuration Management Practices 31
9.A.12. Operating an IT Service Center and Responding to and Repairing Reported Problems 33
9.A.13. Performing Root Cause Analyses 34
9.A.14. Developing and Implementing IT Asset Lifecycle Plans 34
9.A.15. Implementing a Quality Assurance Program 35
9.A.16. Performing Monitoring and Reporting of Performance of IT Functions and Complying with Service Level Agreements 35
9.A.17. Providing Appropriate and Timely Access to MBTA to Operator IT Staff and Systems 37
9.A.18. Negotiating and Managing Contracts with IT Suppliers Responsibly and by Seeking the Best Value at All Times 37
9.B. BEST PRACTICES SUPPORT 39

APPENDICES ..... Binder 2
9-1 SAMPLE POLICIES AND PROCEDURES FROM YARRA TRAMS

9. INTRODUCTION

I. Executive Summary

IT evolution represents an exciting opportunity for the passenger rail industry in general, and for the MBTA Service in particular. Relationships with customers and readily available, real-time access to information are all enhanced and supported by advances in technology. The MBTA has recognized this opportunity, as evidenced by its high expectations for the IT environment for its commuter rail service. This section of our proposal presents our vision for a leading edge IT environment for the MBTA Service, backed by our global experience in managing passenger transportation systems.

Moving Further Together with IT Services Means:

- **IT innovation to support business processes**
- **IT governance to ensure consistency and adaptability**
- **IT sourcing strategies to obtain more and better for less**
- **Technical leadership and people empowerment**
- **Greater transparency in partnership with the MBTA**

II. The MBTA's Objectives as We Understand Them

The MBTA's Objectives	Our Approach
A) To identify Proposers that demonstrate ability to operate a professional information technology (IT) organization that follows and complies with industry best practices, uses metrics to monitor and improve performance, and successfully operates, maintains, and upgrades the full suite of IT systems and elements needed for delivery of the Commuter Rail Operating Agreement services and the Commuter Rail IT Environment	We will: • Assess the portfolio of current applications and develop plans to improve performance through portfolio rationalization, application improvements and integration of new enabling technologies • Identify and track resolution of IT problems through our new Issue Tracking Portal and resolve them through structured management processes • Continuously monitor network, systems and applications performance to prevent service interruptions and identify areas requiring performance improvements or maintenance • Develop real-time dashboards*, active scorecards and Key Performance Indicators (KPI), and make them accessible to our management and the MBTA to allow real-time monitoring of the Commuter Rail Service performance (* definition: A dashboard is "an easy-to-read, often single-page, real-time user interface, showing a graphical presentation of the current status (snapshot) and historical trends of an organization's key performance indicators to enable instantaneous and informed decisions to be made at a glance.") • Keep up-to-date on leading-edge information technologies that can be applied to the commuter rail business model • Develop business cases to support system and applications upgrades when we recommend changes to the IT environment

The MBTA's Objectives	Our Approach
B) To identify Proposers with experience complying with standards and best practices including PCI-DSS (Payment Card Industry-Data Security Standard)	We will: • Adapt the governance principles and processes developed at other Keolis operations for the MBTA Service • Seek ISO 9001 certification within two years across the entire operation • Ensure that the evolving IT architecture conforms to The Open Group's Architectural Framework (TOGAF) guidelines and other relevant standards specifications • Manage all projects to Project Management Institute (PMI) standards with PMI-certified Project Managers • Follow Information Technology Infrastructure Library (ITIL) management principles • Follow the recommendations and mandates of the IT Steering Committee, Change Control Board, and In Process Reviews to implement systems changes in compliance with standards and best practices • Follow all applicable PCI-DSS requirements, leverage the use of service providers that are PCI-DSS compliant, ensure that all payment solutions incorporate PCI-DSS requirements and audit PCI-DSS compliance on a yearly basis • Structure our quality program to ensure that the use of best practices and standards are well documented and adhered to • Monitor and report on the advances and recommendations of relevant standards organizations as they apply to the commuter rail IT environment • Wherever possible, draw on the direct experience of Keolis and SNCF in complying with standards and best practices for the commuter rail IT environment
C) To identify Proposers with a proven approach to sharing data and system access with customer/agency management in a timely fashion to support contract oversight and planning functions	We will: • Establish an IT Steering Committee to guide technology-related decisions and ensure that they conform to architectural guidelines, policies and procedures. • Form cross-functional IT committees and forums to ensure effective communication between the IT department, functional/operational units and the MBTA • Conduct Technology Round Table discussions for information and evaluation of new and emerging technologies that may be applicable • Actively engage the MBTA in matters related to the IT environment

The MBTA's Objectives	Our Approach
D) To identify Proposers with a high level of ability (i) assessing and managing risks within a complex IT organization involving legacy components and new technology, and (ii) finding creative solutions to ensure efficient and uninterrupted operations	We will: • Assess the viability of all existing systems, networks and applications and establish where they are relative to their product life cycles • Ensure that trained staff are always available to support all systems and applications • Identify all risks associated with the maintenance, operation and viability of legacy systems and applications • Conduct migration planning that will include transition plans from older systems and applications to newer, more sustainable solutions • Assure redundancy of systems and data to prevent down time and data loss • Assist the MBTA in developing and deploying a remote disaster recovery site • Develop a set of policies and procedures that ensure the integrity of the disaster recovery site's systems and data • Develop a Disaster Recovery Plan to ensure IT infrastructure and business continuity

III. Our Assessment of the Current Situation

We have received asset lists from the current operator and an audit report produced by KPMG for the MBTA, but these do not provide the information a full IT audit would disclose. The age of the equipment is not indicated, nor is its state of repair; database analysis is not included, nor is the performance of the various systems. In some cases, we have numbers of applications from a particular vendor but not their names or revision levels.

Based on our review of the limited information available to us, it appears that data integration and application consolidation of the IT environment does not match industry best practices. The configuration of the current systems and applications represents piecemeal solutions that require significant effort to manage and maintain.

We also believe that some required elements and systems were not identified in the MBTA documentation, namely HR, Financial, and ERP solutions. We will work with the MBTA to ensure systems supporting the HR, payroll and finance processes are transferred at commencement of service. If the systems in question are not available, we will deploy our own suite of solutions to support those processes, consistent with the Microsoft Dynamics AX systems deployed in our operations in the U.S. and Canada.

Our limited view of the existing computer systems indicates that much of the existing PC base is about to reach the end of its life cycle. Many of the units are already beyond their expected life cycles and were not replaced as required. This can lead to a loss of productivity. For example, we have determined through Dell laptop express service numbers that, by July of 2014, 80% of existing laptops will need to be replaced, and the software on all desktop systems is currently at older revisions and will need to be upgraded.

The more costly server environment (VM, etc.) and networking equipment are more concerning because they host mission-critical applications/data and ensure connectivity and communication across the commuter rail environment. Warranties and support on these systems have either expired or will expire before the new contract award, according to the audit conducted for the MBTA by KPMG. In our IT

Plan, we will recommend adherence to life cycle planning guidelines to eliminate situations like these, with their unintended consequences.

IV. The Results We Will Deliver

Strategic Vision and Implementation of Architectural Standards and Best Practices

We will improve and transform the IT environment on the MBTA commuter rail service in order to meet present-day and future challenges and accommodate the evolving needs of our customers. In structuring the new IT environment, we will adhere to an overarching architectural framework that is defined by industry best practices, as well as rigorous current technology standards that ensure consideration of the following elements:

- Open systems architecture standards which provides agility and adaptability
- An IT infrastructure that embraces secure, scalable and interoperable technologies
- Highly available, high-speed, secure systems with failover capability
- Development and retention of documentation that meets quality standards
- Provisioning of solutions with intuitive software user interfaces
- Reliable, cost-effective solutions that achieve maximum value for investment

Business Transition Support and Integration of New Components

Our first priority after Notice to Proceed will be to coordinate IT efforts with all workstreams (departments) to evaluate current IT requirements and support new initiatives, taking into account strategic considerations at all stages. Some of the specific initiatives to be undertaken include:

- Auditing and documenting the IT systems, networks and applications
- Auditing and assessing the maintenance management system
- Auditing and assessing the material management system
- Reviewing of the current GIS application for environmental services
- Auditing and assessing the financial system
- Procuring and integrating new Issue Tracking Portal (ITP) software
- Procuring and integrating new digital repository software
- Procuring and installing an Interactive Voice Exchange system

We will evaluate each application's ability to deliver the required level of functionality, its performance characteristics, its ability to be upgraded to correct any deficiencies or meet new goals, and where it is in its product life cycle.

Benefits of Our IT Services Management

Our structured, well-managed approach to IT services will deliver the following benefits to the MBTA Service:

- A unified, consistent approach to managing the IT environment in support of all workstreams and according to an enterprise IT plan or roadmap
- A reduction in the number of applications
- Consolidated, well-maintained databases
- Integration of Quality Assurance guidelines into all processes, projects and procurements
- Enhanced IT organizational structure that maps logically to new IT initiatives, maintenance of legacy systems and applications, and is consistent with the roadmap
- Integration of system monitoring and performance software with the ITP dashboards (see also 9.A.16)
- The free flow of information between us and the MBTA
- Guaranteed access to all systems and software by MBTA IT representatives and management
- IT projects run by certified Project Managers who are also IT professionals
- Continuous investment in training staff to meet the evolving demands of IT

9.A. Information Technology Services Plan

Our plan for IT is based on (I) operational and policy improvements to the existing IT environment, as well as (II) principles and methods to guide our planning and decision making. We have also provided (III) our strategies to contain costs and a (IV) summary of our strategic best practices. These are provided in the following sections followed by the topical discussions of the 18 required elements.

I. Operational and Policy Improvements to the Existing IT Environment

a. Infrastructure and services

We believe that keeping the MBTA's IT systems in good repair relies on a simple, direct and highly effective approach allowing keeping the systems in good repair. The approach we apply includes the following;

- Ensure that all staff are properly trained for the tasks they are required to perform, and keep their training and certifications up to date
- Outsource the support and maintenance of products to their suppliers if they provide such services
- Implement Asset Life Cycle Management policies and procedures to ensure Replacement of systems and software when they reach the end of their OEM-supported life cycles—for example, five years for VM environment components and five years for laptops, etc. Asset life cycle management is also covered in 9.A.14
- Test software when it needs to be upgraded, before full release.
- Perform preventive maintenance as planned.
- Take into account the basic environmental necessities for keeping a computer facility running:
  - Security
  - Clean, stable power sources
  - Adequate air handling
  - Keeping it organized
- Always monitor the network and system performance to make sure that the system infrastructure and applications can support the required activity, and anticipate problems before they happen. We will have performance monitoring in place at all times to ensure uninterrupted system availability
- Produce a solid set of policies and procedures for the entire operation, and align them with Quality Assurance standards
- Communicate the policies and procedures to all staff and contractors responsible for supporting IT operations.
- Follow the policies and procedures
- Update policies and procedures as necessary to achieve continuous system performance improvement

A sample of policies and procedures taken from a Keolis managed service is provided in Appendix 9-1.

b. IT Security

We believe that IT security is an overarching function with the role of oversight and assurance for compliance with internal security policies and external regulatory requirements. We will ensure that an IT governance framework is deployed, the current IT environment is secured and new solutions brought into the current environment respect the security standards in place (patching, personal information protection, identity management, etc.). Through the IT security function, we will manage the compliance with PCI-DSS and the preparation of the SSAE 16 reports. Our IT security function will leverage activities performed by our parent company specialists, to promote a proactive IT organization that remains at the forefront of the fight against IT security threats. Finally, the IT security function will ensure that an adequate disaster recovery plan is in place for operations continuity.

c. Documenting all existing systems, networks and databases including diagnostic analyses

Starting on day one, we will work to establish a strategic vision for the Commuter Rail IT Environment. As we do with all strategic planning, we will first establish a baseline representing existing systems, networks, databases and applications. Specialists in each of the critical areas will begin the process of documenting all the aspects of the existing IT environment and develop all the needed diagrams. This critical audit will be undertaken by experienced IT professionals with a wide range of skills, and will be documented as described in Section 9.A.7 of this plan.

d. Procuring, installing and testing new back-end systems ensuring high availability, performance, security and system monitoring and management

To achieve this, we will undertake the following:

- Transition MBTA existing IT infrastructure and procure and configure our office IT environment including installation of servers, network, Voice Over IP telephone system (which will also support the Customer Services operation), configuration of all systems with all required software, testing of all systems and network, and system launch
- Procure, configure, test and implement parallel (to existing MBTA IT infrastructure) network equipment, network communications software, and VM system server environment that will replace the existing system, which will no longer be within the premium software support life cycle
- Review current maintenance/warranty position and procure needed extensions
- Transfer the IT baseline environment to the new IT infrastructure, perform database optimization and maintenance, test for existing systems/interfaces, perform system tests, review all tests prior to move to production environment, benchmark performance against old environment and deploy into the production environment

e. New solutions implementation and integration

Procure, configure and implement Integrated Voice Response system

We will build an IVR (Interactive Voice Response) and ACD (Automated Call Distributor) telephony environment that will allow intelligent multi-choice queue destination to the various areas and departments within the Service Center. KPI (Key Performance Indicator) results will provide measurable adherence in full compliance with the requirements set forth in the RFP document. The department will be staffed to sufficient service level standards between the hours of 06:30 to 20:00, seven (7) days a week. Design and operational approaches are derived from industry best practices to allow for highly available, mission-critical uptime to minimize risk for potential SLA deviation(s). The IVR and overall telephony will be equipped with sufficient 'paths' / 'voice conduits' to serve calls to Service Center Agents/Personnel in adherence to specified SLAs and will have redundancy/failover technologies built-in for additional robustness.

Multi Primary Rate Interface Telco voice feeds will assure a robust backbone to augment VOIP traffic. We will also deploy industry-leading network equipment and topologies that are backed by Cisco Smart Net™ to ensure that the IT infrastructure maintains the highest level of availability (uptime).

Procure and integrate the Issue Tracking Portal (ITP)

The Issue Tracking Portal (ITP) will be our primary vehicle for tracking and escalating issues, managing problems, managing change requests and any other service requests, and tracking and responding to customer service complaints and issues. To ensure an optimal implementation and adoption, as well as accelerate the time to market, we have chosen the ServiceNow Service Desk cloud service as the off-the-shelf ITP solution. The tool will be deployed as a cross-functional solution.

This service will be deployed under an SaaS (Software as a Service, cloud-based software and services) model immediately after Notice to Proceed. We will be monitoring and reporting on advances in the Federal Cloud Computing Initiative (FCCI) as part of our ongoing technology roundtable presentations. The goal is to deliver a cost effective solution that is secure, fast, reliable, intuitive and easy to use. The infrastructure required to support the application and the application software itself are not capital expenditures borne by us or the MBTA. Cloud services are typically provided for a monthly or annual fee.

The ITP will alert the appropriate personnel to problems requiring resolution by generating tickets that will remain "open" until the related issue has been successfully resolved. All tickets, with their history, will be retained in the ITP system archive for future reference.

Our ITP will be provided through the ServiceNow Service Desk cloud service, which is built on ITIL v3 and allows an easy configuration of natively existing workflows. One of the greater added values of this solution is that it allows configuring easily any user-defined workflows as well, while the changes made are preserved through all automated upgrades. Existing and user-defined workflows will be configured with their respective level of severity and priority, according to Service Level Agreements.

The solution will provide dynamic dashboards and detailed reports on incidents/demand status, claims, complaints and performance metrics that will allow us and the MBTA to identify areas of performance or underperformance and to assess our effectiveness in operating the Commuter Rail Service.

As an SaaS solution, the ITP based on ServiceNow Service Desk will be highly cost efficient. We and the MBTA will be able to use this scalable and flexible solution in a modular fashion, thus avoiding high capital expenditures and operational costs. The solution will allow us to manage different type of access rights, from administration access to "super users" for both IT and business end-users. Every issue will be available and can be reported regularly. Critical elements will be escalated to both our and MBTA management's attention.

Identified MBTA and our personnel will have access to the ITP on demand to review the status of any or all pending issues. They will be able to generate reports sorted by priority, issue, date, status, etc. The system will be flexible enough to generate reports sorted by any of the data fields. Moreover, the MBTA will have the authority to change Service Level priority at its discretion, with appropriate notification of our management. (Section 9.A.17 reinforces access to systems and data by the MBTA)

Automated alerts will be generated for failure or fail-over of mission-critical and mission support systems, applications and networks. During the hours when the IT Department is not manned, alerts will be forwarded to the Chief Train Dispatcher's office, which is open 24 /7. Instructions will be provided with these alerts as to whom to contact and how. On-call IT staff will be pre-scheduled for off-hours support 365 days a year.

Procure and configure the Digital Repository

We will implement a Digital Repository that will be the archive of all technical documentation, policies, procedures, digitized materials, Issue Tickets, quality documentation, and other materials related to operating the MBTA Service. The Digital Repository will be built upon SharePoint software and be configured to be secure via authentication that restricts access to specified users combined with fine-grained access control for managing user privileges. The Repository will be indexed and searchable.

Procure, configure and implement the Radio Frequency Identification (RFID) technology and scanning capabilities

We will procure RFID tags, scanners, and software for the MBTA Service. The work orders generated by the activation of the system will be integrated with our Maintenance Management

System software. We will develop, test, and implement interfaces between the ITP and the RFID scanning solution so that tickets can be generated each time a tagged train or car enters and exits a maintenance facility. Tickets will be closed by a foreman from the maintenance facility and archived in the Digital Repository.

Maintenance Management System

An integrated Maintenance Management System is highly beneficial to any commuter rail system. Keolis is implementing an innovative "off the shelf" IBM application platform called Maximo Application Suite in multiple locations worldwide, including Yarra Trams in Melbourne, Australia.

The Maximo Application Suite consists of six key management modules: asset, work, service, contract, materials and procurement management. The Maximo Enterprise Asset Management solution optimizes performance of every IT asset across the organization, while Maximo for Transportation Asset Management helps maximize return on assets (ROA) through its comprehensive programs for preventive, predictive, routine and unplanned maintenance. Combined, these programs contribute will help reduce costs and increase asset uptime. The combination with Enterprise Asset Management (EAM) and Enterprise Resource Planning (ERP) systems will provide a centralized view of critical business operations.

The strategic move to a unified application suite is not a trivial matter. It is a multi-year undertaking that requires detailed planning and implementation excellence, as we have demonstrated numerous times operating other transportation services. During Mobilization, we will develop a detailed strategy for moving the operations of the MBTA Service to our new system environment as part of our longer-term development program, which we will submit to the MBTA for approval. In the meantime, we will use existing systems to continue seamless management of assets and configure it as necessary to meet requirements of the RFP if the current system is non-compliant.

A project team specifically dedicated to this task will undertake the planning and proposal for implementation, complete with timelines, milestones, financial data, life cycle planning and overall benefits.

GIS software enhancement

We plan to design and implement MapsOnline and PeopleForms, which are web-based Software-as-a-Service (SaaS) platforms, to provide a strong foundation for information management of Engineering and Environmental Services. Both SaaS platforms will be licensed to the MBTA on an annual basis and be available to all key staff wherever they have access to the internet. All users will need to use either of these platforms is an internet device, such as an Android or iPad tablet using an internet browser.

- Our environmental team believes that this use of technology, with its high level of access to information, will increase efficiency dramatically, support sustainable practices, and provide staff with the contemporary tools they need to redefine the process of information access, sharing and recording. We will be able to instantly document field work with notes and photographs, access engineering plans in the field and conduct comparisons of current conditions with past. Map layers (overlays) with GPS data will help us locate structures or equipment, with each type of structure on its own map layer or shown together with others (e.g., view bridges layer only or combine with culverts).

f. Enhancing IT Customer Service – The IT Operator Service Center

We adhere to practices which have proven successful in operating its IT service centers, while maintaining expected performance levels and ensuring information systems availability, solving problems, proactively managing capacity and monitoring the release process.

Our people are crucial to the success of the service center. Individuals with a strong service ethic, who work well under pressure, are excellent

communicators, and who can assess and prioritize issues will be part of our Operator Service Center.

At the heart of the IT service center infrastructure will be the ITP (Issue Tracking Portal). This central piece of software is designed to support service center functions by recording all issues reported, prioritizing the issues, generating issue tickets and ensuring that high-priority issues are escalated through appropriate management channels for successful and rapid resolution.

As with all our operations, metrics reporting the success rates of issues and resolution will be regularly sent to the MBTA and the MBTA will have access to the ITP for instant updates on any or all open issues or issue history.

Capacity planning will be performed by dedicated experts through an impact analysis on technological components in place, for all projects, as well as on a yearly basis and on demand.

The following plans will be developed for the Operator Service Center and will be documented as part of the QA program:

- Plan for maintaining the Operator Service Center
- Plan for making sure that the Operator Service Center remains current on necessary or desirable Updates
- Plan for deploying changes to the Operator Service Center
- Testing requirements for changes in the Operator Service Center
- Plan for ensuring backward compatibility with respect to all systems
- Updates to the Operator Service Center
- Plan for business continuity
- Detailed description of the technical and database architecture of the solution

Our Quality Assurance program is discussed in more detail in Section 9.A.15 of this plan.

g. Access to information and transparency

We believe in transparency as part of our partnership with the MBTA. This partnership could not be possible without easy access by the MBTA to the Commuter Rail IT Environment and to our staff who are providing the IT services. The MBTA will also have access to data and performance against SLAs or KPIs via dashboards and the ability to run reports directly.

Our IT staff will, at all times, view the MBTA as its customer. Customer service will be the highest priority professionally and in support of all Service Level Agreements.

Case: For our contract with the Virginia Railway Express (VRE), Keolis Rail Services Virginia configured a system to provide information about the service to both VRE and ourselves. Its intuitive user interface with the ability to run customized reports on demand satisfies all requirements. Our customer has access to the same data in the same timeframe as us. We truly function as partners in delivery of the rail service to the ridership. KORS is the system name.

One of the most dynamic features of the KORS system is its ability to provide real-time web-based reporting. The system utilizes Crystal Reports to provide automatically generated reports as required or requested. As mentioned earlier, this feature allows both management and employees necessary access to information as authorized. Employees with the proper access have the ability to log on to a secured website and access a variety of prepared reports. Additionally, the reporting function provides the ability to create an assortment of ad hoc reports. Using the KORS system, we have the capability to provide, without limitation, the following web-based reports:

- Ridership by train, station, etc.
- On-time performance
- Daily train and engine assignments
- Train consist information
- Delay causality, location, duration, etc.
- Unusual occurrences
- Records of fare evasion
- Hazardous conditions encountered
- Drug and alcohol testing
- Service disruptions/train cancellations
- Accidents/incidents

- Equipment inspections, servicing, maintenance, repairs, cleaning, etc.

h. Disaster recovery

- We will develop, with the MBTA, a Disaster Recovery Plan to ensure IT infrastructure and solutions continuity and mitigate the impacts of possible risks on business continuity. This plan will be integrated within the framework of a global business continuity plan to be adopted by the entire organization. A set of policies and procedures will be developed to ensure predictable responses to relevant situations. Our Disaster Recovery Plan is discussed here (see Figure 9-1) and later in section 9.A.12.

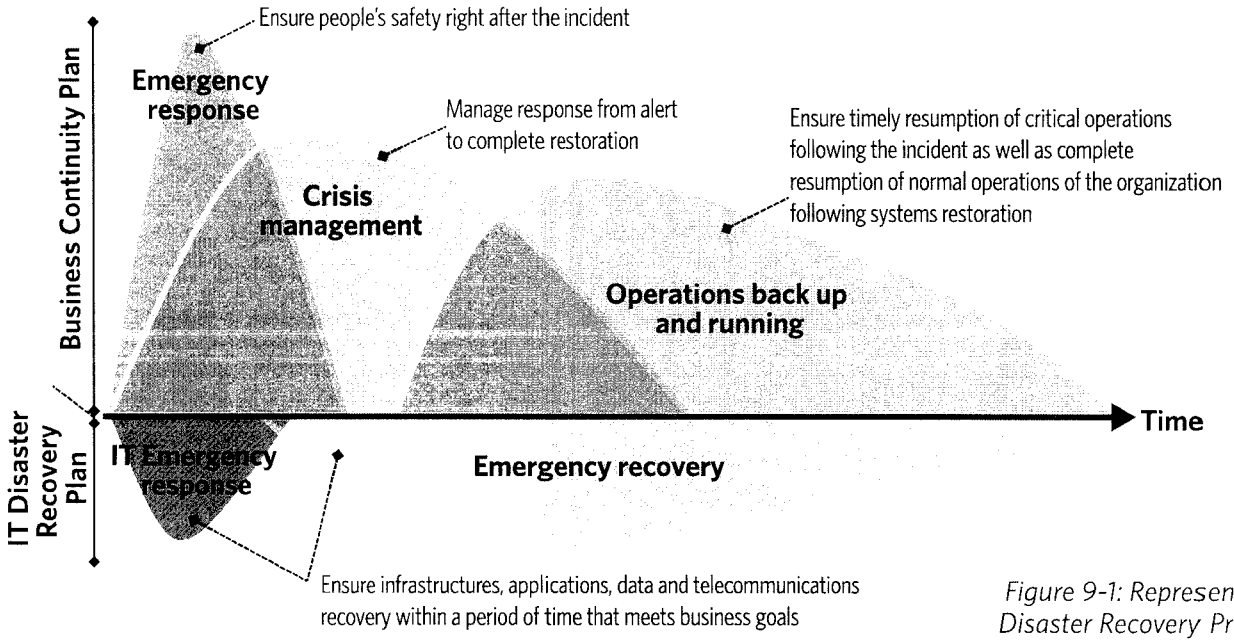

Ensure people's safety right after the incident
Emergency response
Manage response from alert to complete restoration
Ensure timely resumption of critical operations following the incident as well as complete resumption of normal operations of the organization following systems restoration
Business Continuity Plan
Crisis management
Operations back up and running
Time
IT Disaster Recovery Plan
IT Emergency response
Emergency recovery
Ensure infrastructures, applications, data and telecommunications recovery within a period of time that meets business goals

Figure 9-1: Representative Disaster Recovery Process

i. Root Cause Analyses

- We recognize that performing Root Cause Analysis is one of the essentials requirements in a quality system for continual improvement. Steps taken in the process include those below;
  - Problem selection
  - Problem statement
  - Identify possible causes
  - Implement corrective actions
  - Analyze effectiveness
  - Update procedures
  - Check and control
- A major benefit to a structured root cause analysis process is its link to the Quality Assurance program that will be put in place and the resulting updates in processes and documentation that will be made after successful root cause analyses. This is a significant part of the effort to improve the organization continually.

Root cause analysis information in process will be communicated to the MBTA via IPRs with a frequency defined by the service level of the problem being addressed. Root Cause Analysis is also discussed in Section 9.A.13.

II. Principles and Methods to Guide Our Planning and Decision Making

The following are principles we use and live by in our IT operations. By following these principles and methods, we can consistently achieve a highly effective, adaptable IT environment run by people with the right skill sets, who manage IT projects predictably and on budget and that ultimately produce precisely the results that were expected. Figure 9-2 below illustrates the

elements we consider as components of the strategic roadmap are developed.

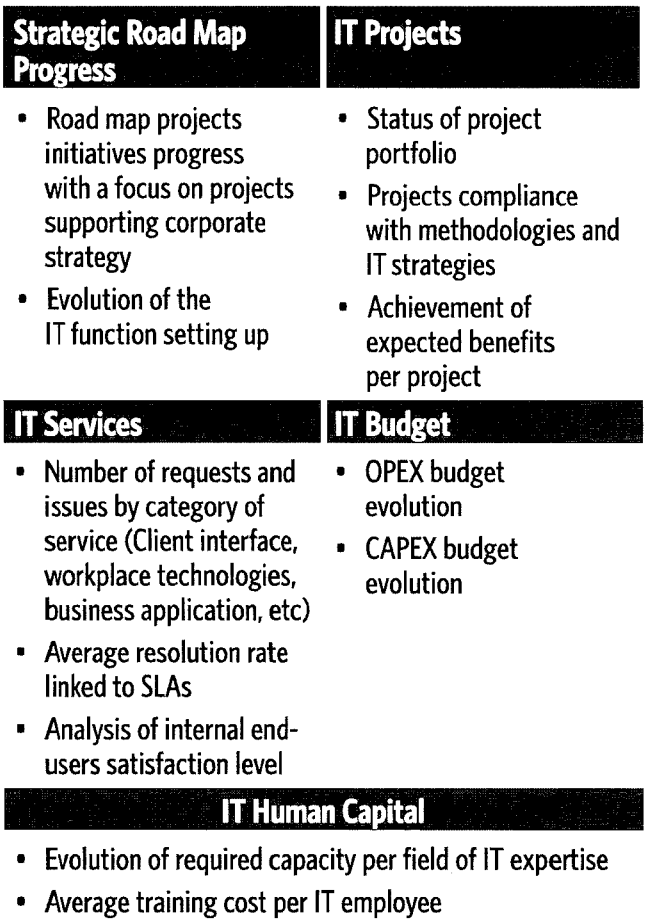

Strategic Road Map Progress
• Road map projects initiatives progress with a focus on projects supporting corporate strategy
• Evolution of the IT function setting up
IT Projects
• Status of project portfolio
• Projects compliance with methodologies and IT strategies
• Achievement of expected benefits per project
IT Services
• Number of requests and issues by category of service (Client interface, workplace technologies, business application, etc)
• Average resolution rate linked to SLAs
• Analysis of internal end-users satisfaction level
IT Budget
• OPEX budget evolution
• CAPEX budget evolution
IT Human Capital
• Evolution of required capacity per field of IT expertise
• Average training cost per IT employee

Figure 9-2: Areas for KDI Development

a. Principles

1. Enterprise Architecture

An enterprise architecture framework is vital when maintaining and building a robust IT environment that provides agility in consolidating existing applications and deploying new solutions. Our enterprise architecture framework will enable cost optimization through the design of solutions that limit applications and data proliferation and promote the use of current IT innovations (e.g., cloud computing, mobile technology, integrated applications) to build a sustainable and manageable future IT environment. The enterprise architecture will also be focused on supporting the achievement of strategic goals and aligning IT operations and strategies with business needs.

2. Compliance and Risk Management

We will continuously monitor regulatory changes to ensure compliance of our IT function with MBTA policies and procedures, industry practices and other applicable standards. We will also continuously assess and monitor areas of compliance risk across the IT function, and look for ways to improve IT security. Our CIO will develop an IT service strategy that is either based on or similar in organization to the ITIL service strategy guidelines, and we will follow all applicable MBTA standards in performance of the Commuter Rail Service, including MBTA Security Standards (NIST publications and ISO27002).

We will also comply with industry standards for security, interoperability, software development and open systems architectures. Some examples include:

- Security standards, which in some cases are very specific, especially concerning credit card payment and personal information. We will follow all applicable PCI-DSS requirements. A baseline audit will be performed to assess our exposure. We will select solutions to leverage the use of service providers that are PCI-DSS compliant. All payment solution developed internally will incorporate all PCI-DSS requirements and will be audited on a yearly basis to ensure compliance.
- Open Enterprise Architecture standards, using the TOGAF framework as a baseline
- Open Architecture Standard Interfaces standards
- MBTA Change procedures

We will set up processes to identify, control and minimize the impact of IT operational risks to ensure business continuity and value creation, following, among other frameworks, the standards covered by ISO/IEC 27005 and NIST SP 800 30 framework. Major elements addressed while managing the risks will be:

- Risk assessment, as derived from an evaluation of threats and vulnerabilities
- Management decision
- Control implementation
- Effectiveness review

3. Project Management

We will use project management methodologies to execute the IT roadmap and keep it continuously aligned with the MBTA's priorities and policies. Project management practices will work in tandem with the established IT organization and committees and the enterprise architecture framework. We use the standard PMBOK methodology (by the PMI), with a proprietary set of toolkits and enablers.

4. Acquisition and Development of Applications

We will acquire and develop applications based on the enterprise architecture definition of customer business needs and requirements, the prioritization and approval process and the standard methodology in place

5. Business Intelligence (BI)

To provide better visibility to the MBTA and the various business units, as well as enable effective strategic decision making, we will implement a BI solution that will sit on top of operational and administrative applications and data. The BI solution will provide business units with secured access to relevant data and powerful tools to deliver any required information/KPIs that can orient day-to-day operations and improve decision making within each department.

Our IT team will ensure efficient strategic and operational decision making across the organization through BI and data analytics activities consisting of:

Delivering information:

- Developing standards and guidelines for information delivery and analytics
- Collecting and prioritizing informational requirements
- Designing complex reports, dashboards and advanced analytical models
- Leading BI solution projects
- Managing a BI help desk and providing training to user communities

Transforming data:

- Creating and maintaining data models
- Managing BI architecture, environments and infrastructure
- Managing data and tools access
- Controlling data integrity
- Leading projects associated with the data warehouse evolution

6. Standards and Best Practice Frameworks

To maintain the IT environment to the high standards established during Mobilization, we will seek ISO 9001 certification within two years. Documentation of systems, policies, procedures, measurement, compliance, development and certification activities within the quality assurance framework will ensure the ongoing quality of service. This model is the basis for continuous improvement of all work streams throughout the contract period and well into the future.

The strength of our commitment is such that we have established a relationship with one of the world's leading quality organizations, Bureau Veritas (www.us.bureauveritas.com). Bureau Veritas will be our partner in the development of quality systems for the MBTA Service, and will remain our partner through our successful ISO 9001 certification.

Our approach to developing, managing and maintaining the Commuter Rail IT Environment will embrace industry best practices for the various IT functions:

- Enterprise architecture framework based on the TOGAF open standard
- Portfolio and project management based on the PMBOK methodology by the Project Management Institute (PMI)
- IT service delivery built on the ITIL framework
- IT security governance framework based on the ISO 27002 standard and compliant with PCI-DSS requirements

- IT internal control environment based on the COBIT framework

b. Methods

To ensure that our IT Department sustains and extends the organization's strategies and objectives, we will implement and apply industry standards and frameworks, including among others:

1. Quality Assurance

We are making a major commitment to Quality Assurance by initiating a partnership with Bureau Veritas, as described above. Bureau Veritas, will support us throughout the ISO 9001 implementation by developing the Quality Program Plan and, as needed, quality training and adherence to the ISO certification process.

2. Processes, Policies and Procedures

We will make a point of managing the IT function in line with recognized rules and guidelines to ensure consistency and compliance with the company's strategic direction and to manage risks. Moreover, we will leverage IT process management best practices to realize the organization's strategic objectives. Promoting a structured IT process culture will facilitate IT performance tracking and continuous improvement. Clear procedures will provide instructions to perform the tasks pertaining to the process.

We will follow MBTA and PMI guidelines for all projects initiated in the Commuter Rail IT Environment. Each project shall follow standard project management concepts for project initiation, planning, execution, monitoring and controlling, and closing.

We will improve operational IT service management through the ITIL framework. Per the ITIL Services Strategy Guidelines, the CIO shall apply the guidelines to the operation of the Commuter Rail IT Environment. The CIO will construct a vision for the IT operation and synthesize its complex components guided by industry best practices, including:

- Measuring the achievement of business and IT goals and identification of the business and IT process owners as well as the establishment of an internal control environment through COBIT framework
- Enterprise architecture design with the help of TOGAF toolsets
- Management of IT projects involving PMP certified project managers
- Ensuring IT services compliance with quality assurance requirements

We will implement Configuration Management Policies consistent with ISO standards for Information Assurance, Operating System Configuration Management, Preventive Maintenance, Predictive Maintenance and regularly updated Status of the IT environment. All systems will be documented consistently, and these documents will be crucial in supporting the change management process.

We will develop process ownership to establish the responsibility and accountability for the consistent design and deployment of a given process as well as the standard for process performance. The process ownership model will be used to manage compliance and performance of the business processes. Two main approaches will be used for process ownership:

- Functional process ownership: an owner is accountable for a functional area within an end-to-end process
- Global end-to-end process ownership: a single person is accountable for the entire end-to-end process

3. Control of Documents

Employing the Digital Repository, we will maintain strict control of critical documents:

- Control of records
- Internal audits
- Control of nonconforming products / services
- Corrective actions
- Preventive actions

4. Knowledge Management

We believe that quality, compliance, and knowledge management processes rely also on comprehensive, up-to-date IT environment documentation. We will follow the MBTA Digital Policy and pay a particular attention to the following principles:

- We will document the Commuter Rail IT Environment to include specifications, requirements documents, engineering manuals (including but not limited to hardware, equipment, and software engineering manuals), end-user manuals, training materials, handbooks, data-flow and work-flow diagrams, diagrams of system and subsystem architecture, network topologies, drawings, engineering changes and related materials.
- The documentation produced by us for the Commuter Rail IT Environment will be guided by ISO documentation standard 9001:2008 and our Quality Plan in accordance with the goal of achieving ISO certification within two years of Commencement of Services.
- All documentation will be indexed and available in the newly established Digital Repository and shall be accessible at all times by us and the MBTA.
- Documentation will be revised immediately as systems are upgraded or changed in any way, ensuring that up-to-date information is always available.
- A revision numbering system will be established that will indicate the unique component or system being documented, its revision level, revision history and date of latest revision. This numbering system will be published in the Digital Repository and be available at all times. A change document listing the changes made and where they were made shall accompany each document in the repository.
- The IT Change Control Board shall be notified of any changes in documentation and shall be supplied or provided links to the changed documentation.

5. Portfolio and Program Management

We will manage all business transformation, business enhancement and IT projects through various portfolios, using well-established frameworks and standards. Specifically, we will employ the Project Management Body of Knowledge (PMBOK) published by the Project Management Institute (PMI). Our process is described in more detail in section 9.A.11. and is illustrated in Figure 9-3 below.

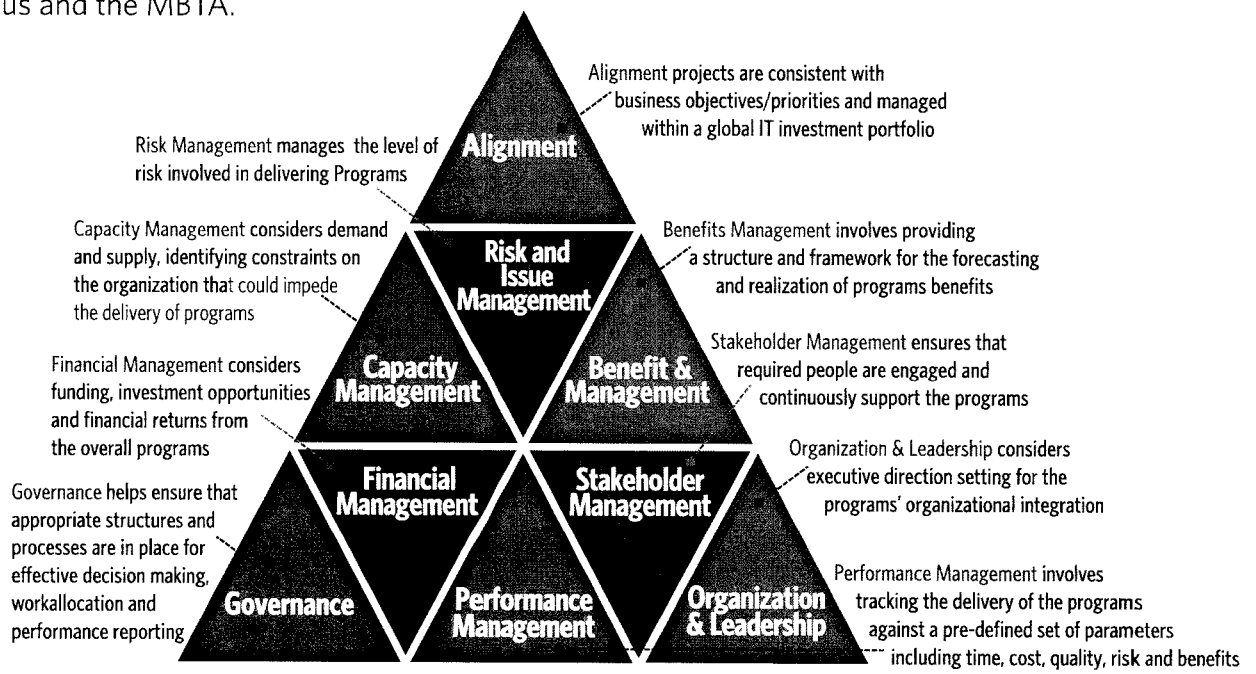

Alignment projects are consistent with business objectives/priorities and managed within a global IT investment portfolio
Risk Management manages the level of risk involved in delivering Programs
Capacity Management considers demand and supply, identifying constraints on the organization that could impede the delivery of programs
Benefits Management involves providing a structure and framework for the forecasting and realization of programs benefits
Financial Management considers funding, investment opportunities and financial returns from the overall programs
Stakeholder Management ensures that required people are engaged and continuously support the programs
Organization & Leadership considers executive direction setting for the programs' organizational integration
Governance helps ensure that appropriate structures and processes are in place for effective decision making, workallocation and performance reporting
Performance Management involves tracking the delivery of the programs against a pre-defined set of parameters including time, cost, quality, risk and benefits
Alignment
Risk and Issue Management
Capacity Management
Benefit & Management
Financial Management
Stakeholder Management
Governance
Performance Management
Organization & Leadership

Figure 9-3: Portfolio and Program Management Process

6. The IT-to-Business Relationship

To support MBTA strategic directions, we will use the elaborated IT strategy to guide and effectively manage the IT environment.

- Our Program and Portfolio Management Process will provide a mechanism for the identification and reporting of all projects information and metrics throughout their lifecycle. Moreover it will ensure that information, regarding current as well as future projects, is readily available to appropriate levels of management, as needed. It will provide the required visibility to effectively manage project interdependencies and will for proper accountability for the on time and on budget execution of projects.
- Project portfolios and their underlying projects will be in line with the overall strategic objectives of the MBTA and will allow us to regularly review entire portfolios, allocate resources appropriately and adjust projects to produce the highest returns.
- At the Analysis & Design phase we will essentially determine the "What" of a project. What should be carried out in order to realize maximum project efficiencies? The project kick-off meeting, from the initiation stage, is coupled with subsequent collaboration meetings (with all appropriate stakeholders) to analyze and determine the best approach for the project. The project manager will facilitate discussions and document the approach accordingly within the project plan. During this phase we will deliver the following components: Project Plan (adjustment and update), Change Control, Requirements Documentation, Issues / Risk Log (Throughout project lifecycle), and Meeting Agenda / Minutes (Throughout project lifecycle)
- During the development phase we will carry out what was predetermined in the analysis & design phase. Development is essentially the "creation" of the main components of the project. We aim to execute this phase as effectively and efficiently as possible while closely adhering to the scope of the charter and the defined deliverables. During this phase We will carry out the following components: Project Management Plan (Evolutions), Change Control (As needed), Issues / Risk Log (Throughout project lifecycle), and Meeting Agenda / Minutes (Throughout project lifecycle)
- For the QA & testing phase we will ensure that the output from the development phase does not contain any unacceptable errors or quality issues. During this phase We will carry out the following components: Test Strategy, Quality Assurance (QA), Project Management Plan (Further evolution of the project plan to monitor and control progress), Change Control (As needed), Issues / Risk Log (Throughout project lifecycle), and Meeting Agenda / Minutes (Throughout project lifecycle)
- At the implementation phase we will implement/ execute upon the output from the QA & Testing phase. At this stage, all the appropriate planning and testing has been completed and the product, service or process is now ready to be rolled out to the intended audience. During the implementation phase, we will complete the following components: Communication Plan, Contingency Plan, Project Management Plan (Further evolution of the project plan to monitor and control progress), Change Control (As needed), Issues / Risk Log (Throughout project lifecycle), and Meeting Agenda / Minutes (Throughout project lifecycle)
- Finally, at the post Implementation phase, we validate results from the implementation phase. The goal is to confirm if execution went according to plan and whether it accomplished all of the objectives identified in the project charter. Why is this often neglected phase important? First, it is the phase where a project is officially signed-off on by the sponsor and ultimately closed. Secondly, it provides an opportunity to identify areas where similar future projects can be executed upon in a more effective manner. During this phase, we will deliver the following components: Lessons Learned, Project Closure Report, Project Management Final Plan

7. Project Portfolio

- We will manage all business transformation, business enhancement and IT projects through various portfolios of projects, using well established frameworks and standards, more specifically the PMBOK published by the Project Management Institute (PMI).
- We will manage and monitor each project in every project portfolio across all phases of its lifecycle: Conceptualization, Initiation, Analysis & Design, Development, QA & Testing, Implementation and Post-Implementation.
  - The conceptualization phase presents an idea or concept of a potential project to be carried out. These concepts will require collaborative discussions in order to fully develop the details supporting the potential project. During this phase, we will prepare a New Project Request (NPR) that includes: Description of Initiative, Background & Strategy, Project Scope, Options & Recommendations, Cost/Benefit Analysis, Schedule, Risk Factors
  - Once approved, we will begin the initiation phase and the planning associated with carrying out an approved project idea. This idea is carried over from the conceptualization phase. Project Initiation implies that a project is formally kicking-off, and a project manager (or business lead) will officially be assigned at this time. During this phase we will deliver the following components: Project Charter, Communication Plan, Project Kick-Off Meeting, Project Plan, Issues / Risk Log, Meeting Agenda / Minutes, and Status Reporting

Additional information is available in section 9.A.11.

8. The Application Portfolio

Our application portfolio supports an IT enabled achievement of strategic objectives, improvements in cost efficiency and an increased productivity. We will map those strategic objectives and business requirements to the business model to support decision making processes and prioritize the project portfolios. Our Rail IT Workstream Business Model is shown in Figure 9-4.

Main Functions Description				
Administration and Measurement (Reporting)	**Business Relationship and Solution Architect**	**Project Management Office**	**Business Solutions**	**IT Operations**
Maintain IT project portfolio	Develop the IT strategic road map under the responsibility of the CIO	Define project management standards and methodologies	Manage delivery of business solutions to the organization	Manage technical teams
Support IT resources capacity management	Manage and maintain the enterprise architecture	Implement project management tools	Oversee level 2 and 3 support for in-house solutions	Oversee level 1 and 2 users support
Prepare and track IT budget	Maintain and develop technological expertise and ensure technological watch	Ensure projects QA and adoption of standards and best practices	Drive the evolution of business solutions	Oversee infrastructure and IT operations management
Manage vendors relationship		Perform projects oversight	Manage a pool of business analysts to ensure business requirements gathering and analysis	Oversee security Ensure policies definition and maintenance

Figure 9-4: Rail IT Workstream Business Model

We will assess the current IT baseline across various dimensions including data domain definition and origin, application description and health status, the integration between applications, and technological component.

We will refine all business needs that were identified and add needs stemming from industry specific trends (please refer to section 9.A.6.) using our international network and global reach. We will also establish a target architecture for MBTA that can evolve predictably over time.

Based on a gap analysis between the current assessment and the defined target architecture, we will perform feasibility studies and build the business case for all evolution initiatives.

We will obtain the proper approval from MBTA and the joint governing body on the business case before developing a realistic transition plan, prioritize projects, finalize the architecture vision, the transition architectures and manage the evolution. Core projects will be prioritized according to a project portfolio approach and transition plans (short and long term) will be developed.

9. Systems Development Life Cycle (SDLC)

We use Systems Development Life Cycle (SDLC) processes and procedures to interface directly with operational IT processes and successfully plan for and deliver full-scale system development initiatives as well as intermediate bug fixes to the IT environment. Some key components covered by our SDLC are: development and configuration processes, integration activities, quality control, and structured solution deployment.

Our SDLC framework covers the following activities:

- Managing the entire life cycle of Analysis-Design-Build of system development including the management of outsourced or distributed development groups
- Interfacing directly with designated business representatives during the definition of system requirements and the prototyping of interfaces
- Coordinating testing and integration activities with the Testing & Quality Control processes
- Securing the necessary resources (people, hardware, software, documentation, etc.) to deliver on system development commitments
- Planning and managing the life cycle of development environments and ensuring their suitability for scheduled work

Our SDLC framework aims at:

- Delivering business requirements at "business speed" (accelerating the development process)
- Focusing on the enterprise
- Developing custom solutions that are differentiators for the core business
- Improving team productivity
- Reducing redundancy in application functionality
- Packaging application functionality as "business services"
- Supporting virtual delivery models (in-house, out-source, SaaS)

III. Strategies to Contain Costs and Realize Full Value from IT Investments

a. Sourcing Strategy

Part of our proposed IT Strategy will be to establish cost savings initiatives for IT sourcing as key enablers of value creation.

We will perform a comprehensive assessment of the current Commuter Rail IT delivery model against the dimensions of efficiency, sourcing viability and risks. Then we will develop potential sourcing scenarios focusing on their suitability to meet IT and business needs. After comprehensive risk analyses, the most appropriate scenarios will be proposed to the MBTA for selection and approval, to finalize the optimal sourcing strategy for the Commuter Rail IT function.

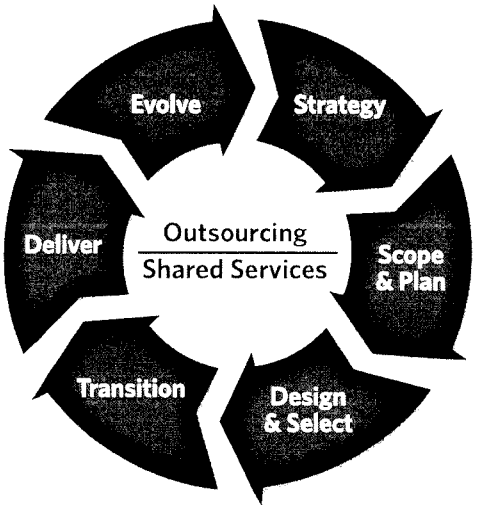


Figure 9-5: IT Sourcing Strategy

Our Guiding Principle Underlying IT Sourcing Strategy:

- Evaluate the maturity of current sourcing approach on a regular basis and benchmark it against industry best practices
- Establish sourcing strategies with controls over implementation and management to reduce concerns about numerous sourcing alternatives
- Increase the benefits that can be realized from shared services, outsourcing, and multi-vendor arrangements
- Identify and manage sourcing risks throughout the entire sourcing life cycle

b. Supplier Relationships

Suppliers tend to fragment their relations with clients to increase their overall sales into different departments or divisions of a company, reducing volume pricing to maximize their revenue. In this context, we believe that centralizing supplier's relationship would force them to negotiate globally and ensure the same quality of services to all departments. Moreover, we will put in place the following practices and requirements:

- We believe an integral part of every QA program extends to suppliers since the supplier audit, evaluation, and selection process is the first step in establishing value.
- Ideally, the suppliers selected will be ISO certified. Working with suppliers who have developed quality programs can only increase value of their products or services.

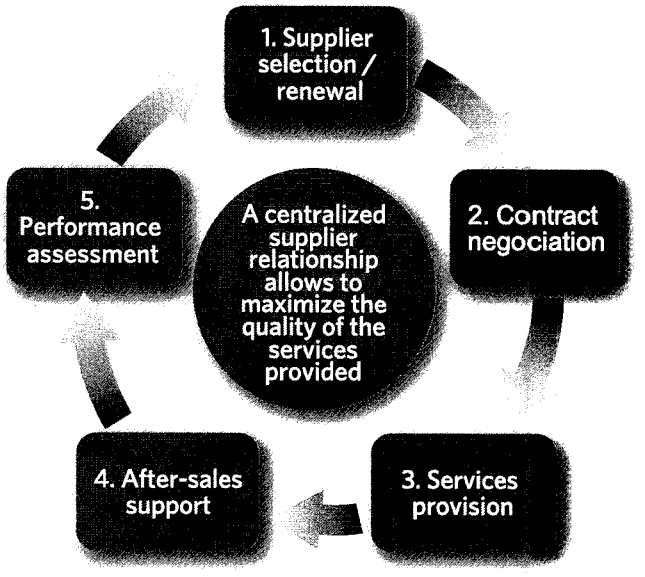

1. Supplier selection / renewal
2. Contract negociation
3. Services provision
4. After-sales support
5. Performance assessment
A centralized supplier relationship allows to maximize the quality of the services provided

Figure 9-6: Asset Life Cycle Management

We understand that IT asset lifecycle plans are an essential to meeting the required level of service of the Commuter Rail IT Environment, consistent with Service Level Agreements (SLAs). Additional information is available in section 9.A.18.

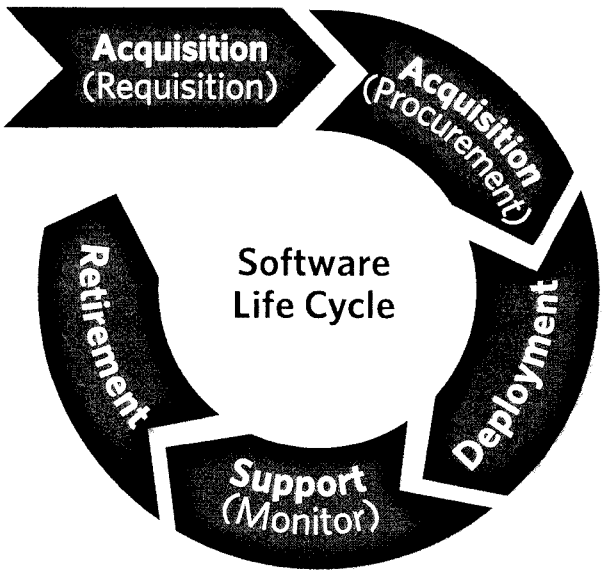


Figure 9-7: Software Life Cycle

- Life cycle planning, which is asset management within an ISO quality context, involves the coordinated and optimized planning, asset selection, acquisition/development, utilization, care (maintenance) and ultimate disposal or renewal of the appropriate assets and asset systems.

IV. Summary of Strategic "Best Practices"

- Application of enterprise architecture principles and methodologies to enable application integration and introduction of new technologies and systems as well as outsourcing applications
- Establishment of IT service offerings (including outsourcing of IT services), the service catalog and the expected service levels as well as adequate KPIs for performance management both at both the service and the strategic levels
- Deployment of an effective IT organization that works seamlessly with internal customers and the MBTA through the various decision committees
- Development and communication of policies and procedures across the organization and with the MBTA
- Focus on compliance with regulatory, security and corporate policies and requirements, implemented with thorough risk management practices
- Standards to be employed by the IT organization in its daily activities (ITIL, COBIT, ISO27002, PMBOK, etc.)
- Enforcement of tight portfolio and program management practices to ensure that projects are always relevant, delivered on time, and within budget
- Effective management of the IT asset lifecycle and suppliers' relationships
- Development of disaster recovery plans to ensure business and operations continuity

9.A.1. Delivering Application and Data Interfaces

We will ensure that application and data interfaces used or developed by the Commuter Rail IT Environment software are made available to the MBTA on or prior to their implementation. We will ensure that all Application Programming Interfaces (APIs) in use shall be well documented, and wherever possible we shall use international standard APIs. Specifically, the APIs used for the Issue Tracking Portal and any other commissioned software will be delivered as described. Documentation will be provided for each API as a reference for use and to establish the precise specification.

Interface Control Documents will developed for all active IT systems and subsystems to communicate all possible inputs to and all potential outputs from APIs will be documented.

An ISO quality process will be applied to the delivery and description of interfaces to ensure consistency and continued updates of this information throughout the contract.

9.A.2. Maintaining Source Code Escrow

We will maintain a secure source code escrow with a third-party escrow agent acceptable to the MBTA. The source code and documentation held in escrow will be maintained to current versions of all software, in a form specified by the MBTA

and that can be printed, displayed and read by a programmer with skills in the applicable programming language(s).

The Source code shall include source code listings, object code listings, design details, flow charts and related material that permit the software to be copied, maintained, updated, improved and compiled.

1. shall include related libraries, other source components, compilers, and linkers so that, when compiled, linked and otherwise manipulated to create the runtime/executable image for the Operator Software, such materials create a complete and fully operational run-time/executable version of the Operator Software;
2. shall contain good and sufficient programmers' comments; and
3. shall constitute the preferred form of the Source Code for making modifications to such Code. The source code escrow will be updated regularly and the code and documentation that are contained in the escrow will be duplicated in the disaster recovery site to ensure that this valuable information is not lost and is available instantly if needed. The implementation of ISO 9001 quality assurance procedures will ensure that this is documented and adhered to, certified, and reviewed regularly per ISO certification guidelines.

9.A.3. Sustaining and/or Transitioning the Existing IT Environment During Mobilization

Above all, the continuity of IT service must be maintained throughout the transition period to our operation of the MBTA Service. As the new IT system is put into operation, it must operate in parallel with existing systems until the older systems can be phased out with no adverse effect, ensuring full continuity and functionality of service.

Concurrently, we will begin to replace equipment that is beyond its useful life or not supported anymore. We have already initiated the process with hardware and software OEMs to obtain quotations for hardware and software, installation services (where needed), and support agreements. Server software will also be upgraded to current revision levels as part of this procurement.

We will provision new IT environment application software that include the Issue Tracking Portal and RFID tracking, Interactive Voice Response system, and Digital Repository software, and will integrate those within the baseline IT environment.

We have determined by way of the KPMG audit that many key infrastructure components (servers, networking equipment, server software, etc.) are either about to schedule off warranty or are not currently under warranty. The risk inherent in running an IT environment under these conditions is extremely high, and to mitigate risks, critical infrastructure systems should be replaced during the Mobilization period. The new replacement VM system will be run in parallel with all existing applications loaded and phased into operation after extensive testing.

Mobilization Team

The IT Personnel required for Mobilization will be a mix of our IT personnel, vendor/supplier personnel, and IT consultants. We estimate that the IT Mobilization Team will consist of approximately 5 IT consultants, our CIO, and vendor/supplier teams. The skills mix of the consultants involved will change during the course of Mobilization. The skills required are as follows:

- IT Planning Team (CIO, IT Consultants) for development of detail plans, overseeing execution, and monitoring the mobilization progress
- IT diagnostic and inventory teams (IT Consultants) to establish and confirm knowledge of existing system
- System Integrators (IT Consultants) Assist with implementation and integration of the ServiceNow ITP platform and the RIFD tracking and ticketing system

- Network Engineers (IT Consultants) work to assure and enhance network design and operations and establish network monitoring
- System and Network Architect (IT Consultants) design and monitor system implementation
- Senior Application Programmers to (IT Consultants) document application interfaces and assist with integration efforts between the baseline IT environment and our provisioned environments
- Vendor/Supplier personnel (VM, Cisco, EMC) install infrastructure systems and networking

Transition Planning

The tasks to be performed by us during the mobilization are highlighted below and grouped by workstream. The implementation schedules are found in Section 12 Mobilization Plan.

1. Diagnostics and Planning

- Use available diagnostic information and perform a high-level system diagnostic/ inventory to document all computer systems, networking systems, applications, interfaces and databases
- Review and evaluate all software and hardware systems, databases, licenses, maintenance and support agreements and warranties
- Review and revise the system migration plan and adjust based on the diagnostic
- Elaborate the IT Operations and Maintenance Cost Plan

2. IT Organization

- CIO to lead the IT transition
- Recruit missing IT resources to complete the target IT organization
- CIO to establish the IT Steering Committee, the Change Control Board and In Process Review - Operations and Projects group

3. IT Infrastructure Transition and Procurement

- Transition MBTA existing IT infrastructure and procure and configure our office IT environment including installation of servers, including email server, networks, PCs/desktop systems, VOIP telephone system (which will also support the Customer Services operation), configuration of all systems with all required software, testing of all systems and network, and system launch
- Procure and configure, test and implement parallel (to existing MBTA IT infrastructure) network equipment, network communications software and the VM system server environment that will replace the existing system, which will no longer be within the premium software support life cycle
- Replace aged VM system hardware and software to ensure high level of support services required of mission-critical systems
- Install all existing applications on the new VM platform without affecting the existing environment. All applications are to be installed tested and benchmarked to ensure proper performance before the new system replaces the old.
- Procure and configure laptops for new staff and produce a plan to replace the laptops for existing staff after Mobilization
- Review current IT maintenance/warranty position contracts and procure extensions as necessary
- Review current Maintenance Management System against RFP requirements to ensure compliance. Configure as necessary to meet requirements prior to making recommendations for a long term solution.

4. New Solutions Implementation

- Procure, configure and implement the Interactive Voice Response system. This system will deliver inbound and outbound messages, surveys, text messages and up-to-date account information instantly and easily without having to speak directly to a person. IVR technology is also used to gather information, as in the case of telephone surveys, in which the user is prompted to answer questions by pushing the numbers on a touch-tone telephone.

- Procure the Issue Tracking Portal (ITP) solution ServiceNow Service Desk. Configure and implement the ITP and integrate with the new Commuter Rail IT Environment, including all mission-critical and mission support applications.
- Procure, configure and implement the Radio Frequency Identification (RFID) technology and scanning capabilities. Explore integration with the Maintenance Management system for generation of work orders in common format and using the same data source.
- A longer term goal will be to integrate the Maintenance Management system into an application suite, such as Maximo.

5. Integration

- Develop, test and implement interfaces to applicable existing IT environment applications
- Develop, test and implement interfaces between the ITP and the RFID scanning solution

6. Governance

- Transition and communicate existing MBTA policies and procedures
- Normalize and adapt to MBTA needs all IT policies and procedures for security, use of standards and best practices in technology, project management, IT Change Control, new software testing, moving software into the production environment, database maintenance and best practices, system migration plan and Quality Assurance and Quality Control
- The CIO will manage the issue escalation process for IT Service Level Agreements. An internal process defining expected actions, reports and reviews will be developed as part of the IT workstream's policies and procedures. A log of open issues will be maintained at all times and available on an ITP dashboard. The escalation process policies and procedures will be developed during Mobilization.

7. Transition of Baseline IT Environment to the New Infrastructure

- Transfer the IT baseline environment to the new IT infrastructure; perform database optimization and maintenance test for existing systems/interfaces.
- Perform system tests, review all tests prior to move to the production environment, benchmark performance against the old environment, and deploy into the production environment.

8. Knowledge Management and Collaboration

- Develop our Intranet for use by us and the MBTA for internal website, access to the Digital Repository, and access to the Issue Tracking Portal
- Develop indexing and management plan for the Digital Repository
- Gather documentation and provide to MBTA all information as well as access to documents used in enabling/transitioning the IT environment
- Transition existing system diagrams, network topology diagrams, and database access diagrams, and document the new IT environment configuration

9. Business Transition Support and Integration with IT Transition

- Coordinate efforts with all workstreams and supplement ongoing IT support to enable their plans including Materials Management, Mechanical Services, RFID, Transportation Services, Management, Safety, and Customer Services, especially as they relate to the Issue Tracking Portal

10. Training

- Develop training plans for IT personnel to enable an effective support of all components of the Commuter Rail IT Environment

9.A.4. Replacing, Upgrading IT Systems to Keep the Same in a State of Good Repair

We will be auditing all systems as a first step in determining the state of the Commuter Rail IT Environment. It is imperative that we determine the status of all systems, applications, networks and data to determine revision levels, upgrade requirements, operational conditions, and support and maintenance agreements in place. This information will also facilitate the Environment's transition to the target architecture and the achievement of strategic IT goals.

We will define IT tactical plans for each component of the IT environment, describing the detailed initiatives required during the first years of operation immediately following Mobilization. The IT tactical plan and associated performance indicators shall be approved by the governing committees and boards."

9.A.5. Tracking and Escalating Issues

Our primary vehicle for tracking and escalating issues, managing problems, change requests and any other service requests will be the ITP (Issue Tracking Portal), which is described in section 9.A.I.e from which the following text was extracted.

The Issue Tracking Portal (ITP) will be our primary vehicle for tracking and escalating issues, managing problems, managing change requests and any other service requests, and tracking and responding to customer service complaints and issues. To ensure an optimal implementation and adoption, as well as accelerate the time to market, we have chosen the ServiceNow Service Desk cloud service as the off-the-shelf ITP solution. The tool will be deployed as a cross-functional solution.

This service will be deployed under an SaaS (Software as a Service, Cloud based software and services) model immediately after Notice to Proceed. The goal is to deliver a cost effective solution that is secure, fast, reliable, intuitive and easy to use. The infrastructure required to support the application and the application software itself are not capital expenditures borne by us or the MBTA. Cloud services are typically provided for a monthly or annual fee.

The ITP will alert the appropriate personnel to problems requiring resolution by generating tickets that will remain "open" until the related issue has been successfully resolved. All tickets, with their history, will be retained in the ITP system archive for future reference.

Our ITP will be provided through the ServiceNow Service Desk cloud service, which is built on ITIL v3 and allows easy configuration of natively existing workflows. One of the greater added values of this solution is that it allows configuring easily any user-defined workflows as well, while the changes made are preserved through all automated upgrades. Existing and user-defined workflows will be configured with their respective level of severity and priority, according to Service Level Agreements.

The solution will provide dynamic dashboards and detailed reports on incidents/demand status, claims, complaints and performance metrics that will allow us and the MBTA to identify areas of performance or underperformance and to assess our effectiveness in operating the Commuter Rail Service.

As an SaaS solution, the ITP based on ServiceNow Service Desk will be highly cost efficient. We and the MBTA will be able to use this scalable and flexible solution in a modular fashion, thus avoiding high capital expenditures and operational costs. The solution will allow us to manage different type of access rights, from administration access to "super users" for both IT and business end-users. Every open issue will be viewable and status reports can be generated in real time. Critical elements will be escalated to both our and MBTA management's attention.

Identified MBTA and our personnel will have access to the ITP on demand to review the status of any or all pending issues. They will be able to generate reports sorted by priority, issue, date, status, etc. The system will be flexible enough to generate reports sorted by any of the data fields.

Moreover, the MBTA will have the authority to change Service Level priority at its discretion, with appropriate notification of our management. (Section 9.A.17 reinforces access to systems and data by the MBTA)

Automated alerts will be generated for failure or fail-over of mission-critical and mission support systems, applications and networks. During the hours when the IT Department is not manned, alerts will be forwarded to the Assistant Chief Train Dispatcher's office, which is open 24 /7. Instructions will be provided with these alerts as to whom to contact and how. On-call IT staff will be pre-scheduled for off-hours support 365 days a year.

IT Service Level Agreements

While end-user support will be enabled by the ITP (Issue Tracking Portal), we will commit to monitor and report the performance of IT systems and applications and comply with SLAs to ensure optimal performance. More specifically;

- We will implement Whatsup Gold Enterprise, or an equivalent, to monitor and log the performance of systems, networks and applications across the Commuter Rail IT Environment.
- Performance metrics will be filtered, analyzed and reported monthly to establish baseline metrics for performance comparisons over time and establish quality milestones to ensure that commuter rail IT systems meet quality standards and Service Level Agreements.
- Performance logs will be archived within the Digital Repository and will be accessible by the MBTA and our IT professionals.
- Ongoing performance monitoring will be done via a dashboard approach, whereby critical network, system and application measurements will be visible at all times to our Operator Service Center personnel. These personnel will be able to identify problems or potential problems and create tickets in the ITP for follow-up testing and resolution. While there is performance monitoring software in the system now, we are recommending upgrading it to a higher-level version of the same software with advanced features.

9.A.6. Understanding and Utilizing New Technologies Such as RFID (Radio Frequency Identification)

To support MBTA strategic directions, we will use our Rail IT Workstream Business Model (described in 9.A.II.b.8) and the elaborated IT strategy to operate and manage effectively the Commuter Rail IT Environment. We will map those strategic directions and business needs to our rail business model to support the decision-making process and prioritization of projects.

- We will assess the current IT baseline across various dimensions including data domain definition and origin, application description and health status, the integration between applications, and technological component.
- We will refine all business needs that were identified and add needs stemming from industry-specific trends (see Innovation below) using our international network and global reach, and we will establish a target architecture for MBTA that will allow for evolution over time.
- Based on a gap analysis between the current assessment and the defined target architecture, we will perform feasibility studies and build business cases for all evolution initiatives.
- We will obtain the proper approval from MBTA and the joint governing body on the business case before developing a realistic transition plan, prioritizing projects, finalizing the architecture vision, transitioning the architectures and managing the evolution. Core projects will be prioritized according to a project portfolio approach and transition plans (short and long term) will be developed.

Innovation

Operational and project excellence is not the only thing we will focus on. We understand that IT innovation is a key driver of the MBTA commuter rail strategy, and will help to improve overall

business efficiency and ultimately enhance customers' experience.

In this respect, our IT function will drive innovation initiatives including:

- Understanding and utilizing new technologies such as RFID (radio frequency identification) and NFC (Near Field Communication)
- Radio Frequency Identification (RFID) technology is an innovative solution that will benefit Maintenance Management. We will procure RFID tags, scanners, and software for the MBTA and integrate it with the Maintenance Management System. This is also discussed in section 9.A.1.E.
- Applying the value of standards and best practices as applied to IT innovation
- Leading Technology Round Table discussions to provide the following for each new technology:
  - Overview, platform requirements, claimed uses
  - Current uses
  - Demonstrations (as available)
  - Maturity assessment
  - Anticipated trends
  - Ease of and potential for implementation
  - Risks associated
  - Benefits demonstrated
- Business requirements will drive specific topics covered in Technology Round Table discussions, some of which are included below:
  - GIS applications and their use by Environmental Services and Engineering
  - RFID applications tracking assets and integration with management systems
  - IVR uses of Interactive Voice Exchange systems, especially in support of Customer Services
  - NFC applications for ticketing and more
- Training will be provided for all new technologies adopted. Where necessary or advantageous, training will also be provided on underlying concepts. On-line training resources will also be considered to accomplish knowledge transfer.
- The approval for the use of new technologies must be granted by the MBTA Change Control Board and our workstream and business management.

9.A.7. Documenting the IT Environment

We believe that quality, compliance and knowledge management processes rely also on a comprehensive, up-to-date documentation of the IT environment. We will follow the MBTA Digital Policy and pay particular attention to the following principles:

- We will document the Commuter Rail IT Environment to include specifications, requirements documents, engineering manuals (including but not limited to hardware, equipment and software engineering manuals), end-user manuals, training materials, handbooks, data-flow and work-flow diagrams, diagrams of system and subsystem architecture, network topologies, drawings, engineering changes and related materials.
- The documentation produced by us for the Commuter Rail IT Environment will be guided by ISO documentation standard 9001:2008 and our Quality Plan, in accordance with the goal of achieving ISO certification within two years of Commencement of Services.
- All documentation will be indexed and available in the newly established Digital Repository and shall be accessible at all times by the MBTA and our personnel.
- Documentation will be revised immediately as systems are upgraded or changed in any way, ensuring that up-to-date information is always available.
- A revision numbering system will be established that will indicate the unique component or system being documented, its revision level, revision history and date of latest revision. This numbering system will be published in the Digital Repository and will be available at all times. A change document listing the changes made and where they

were made shall accompany each document in the repository.

- The IT Change Control Board shall be notified of any changes in documentation and shall be supplied or provided links to the changed documentation.

9.A.8. Managing an IT Organization and Staff

We propose a structured IT management approach surrounded by a governance structure such as IT Steering Committees, Change Control Board and other enhancements to the committee structure.

The IT Organization

We will commit to set up an IT organization adapted to the MBTA Service's size, complexity and business model (Figure 9-8). The IT organization will act as a central IT service and expertise provider, structured around five main functions shown in Figure 9-9. Note that we have recognized the importance of project management, business analysis and IT architecture in the new functional model. The model represents more than a group of

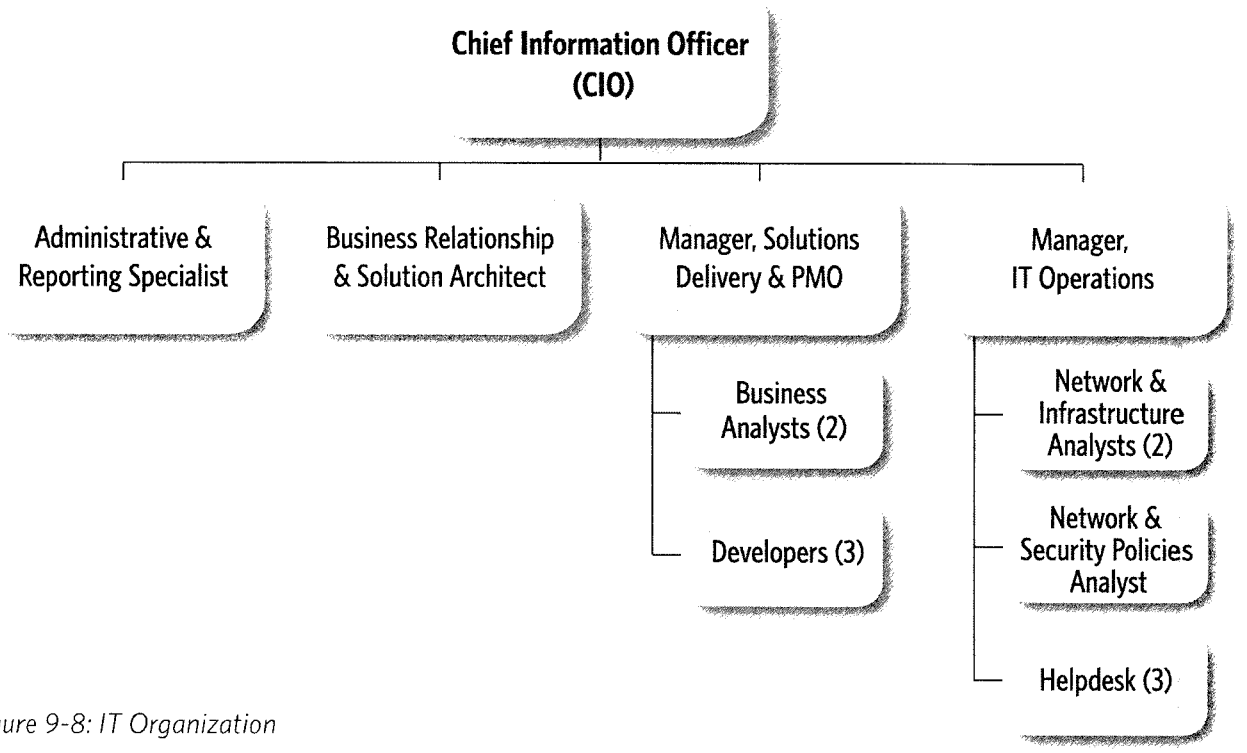


Figure 9-8: IT Organization

Main Functions Description				
Administration and Measurement (Reporting)	**Business Relationship and Solution Architect**	**Project Management Office**	**Business Solutions**	**IT Operations**
Maintain IT project portfolio	Develop the IT strategic road map under the responsibility of the CIO	Define project management standards and methodologies	Manage delivery of business solutions to the organization	Manage technical teams
Support IT resources capacity management	Manage and maintain the enterprise architecture	Implement project management tools	Oversee level 2 and 3 support for in-house solutions	Oversee level 1 and 2 users support
Prepare and track IT budget	Maintain and develop technological expertise and ensure technological watch	Ensure projects QA and adoption of standards and best practices	Drive the evolution of business solutions	Oversee infrastructure and IT operations management
Manage vendors relationship		Perform projects oversight	Manage a pool of business analysts to ensure business requirements gathering and analysis	Oversee security Ensure policies definition and maintenance

Figure 9-9: Rail IT Workstream Business Model

application and network support specialists. The model reinforces the importance of architectural planning and sound project management, and it focuses its activity in supporting business operations through business analysis. This model considers the enterprise as a functional whole, not a collection of unrelated pieces.

The CIO

The Chief Information Officer (CIO) will provide technology vision and leadership in the development and implementation of the IT strategic roadmap. He or she will lead the IT function, including the maintenance, planning and implementation of enterprise information systems and associated services to support business operations and innovation, and achieve more effective and cost-beneficial enterprise-wide IT operations.

The CIO will be accountable for all components, services and resources associated to the Commuter Rail IT Environment, including its maintenance, evolution, security and compliance with all MBTA and other relevant applicable policies. He will track overall IT services performance and budget and report associated KPIs to the MBTA.

In operating passenger transportation services in other locations worldwide, we have repeatedly demonstrated the ability to select CIOs on the basis of clear criteria, highly beneficial to the organization, and focused on building strong business partnerships with customers, other leaders within the company and external vendor organizations.

We believe that the future CIO for the MBTA Service must demonstrate top-level personal commitment and motivation for IT entrepreneurialism to find new methods for supporting the achievement of our strategic goals. He or she will have the capability to influence or create new opportunities for the MBTA Service and its customers. Our CIO will be

a business leader first, and a technologist second (Figure 9-10).

Our CIO will have communication skills and demonstrate the ability to translate technical concepts into concrete examples. His/her persuasion skills will enable him/her to build transverse relationships across the organization, to present new ideas and to get others to adhere.
Our CIO will have the ability to think holistically, to develop a clear and consistent vision, and to meet business requirements by aligning his/her actions accordingly and adopting a user and client-centric approach.
Our CIO will conduct regular reviews and meetings with the MBTA to communicate KPIs and make appropriate decisions to ensure alignment with strategic objectives.
Communication
Leadership
Strategic Vision
CIO Roles
Organizational Skills
Technical Skills
Soft Skills
Our CIO will be responsible for staff organization and management. The current structure of the Staff will be evaluated to ensure alignment with mandated service levels and achievement of assigned mission.
Our CIO will have a good knowledge of all IT domains and a high level understanding of the business solution supporting the operations.
Our CIO will inspire trust, confidence and supporting the operations act as a team player. He/She will demonstrate enthusiasm and innovation while addressing new challenges.

Figure 9-10: CIO Roles

IT Support for Human Capital Management

In partnership with corporate human capital management (HCM) functions and other relevant functions, we will manage our IT people as strategic enablers and contributors to the achievement of IT and corporate goals.

A key driver of IT HCM is workforce planning:

- Workforce planning is the key driver of our IT resources management. This central process is derived from HR strategies, new project needs, procurement policies and the evolution of the application and technology portfolio managed by our IT Department.
- At the crossroads of these processes, IT work force planning will allow us to adjust the IT resources strategy to the evolving project and operational needs by leveraging corporate HR and procurement processes.
- Ultimately, this will allow us to reach the right balance between personnel to be hired as permanent resources and the procurement of external resources to address temporary needs for specific expertise or additional workforce.
- To support its workforce planning activities and maximize value creation, we will develop jointly with MBTA a talent management approach that will allow attracting, selecting, training and promoting new resources, and moving existing employees through the organization.

9.A.9. Conducting Regular Reviews and Meetings with the MBTA

We will implement three process-related committees that will facilitate communications with the MBTA and support all ongoing IT planning, projects and operations.

The **IT Steering Committee** will be responsible for approving longer-term strategic initiatives and the tactical plans for achieving them. Consisting of MBTA and our IT and business management, it will deliver the pre-approval drafts of all initiatives and the first formal communications for each initiative.

The **Change Control Board**, which conforms to ITIL guidelines, meets monthly and has ultimate authority for approving IT projects and procurements. This Board has financial responsibility for IT management and keeping expenses within budget. This committee is led by our CIO and consists of at least two MBTA members who have veto authority over any changes we submitted. Items approved by this board shall then be submitted to the MBTA for written approval before advancing.

In Process Reviews will provide weekly updates of all projects, open issue statuses, and a regular discussion forum for our and MBTA stakeholders.

Figure 9-11 represents the governance framework ensuring that IT strategy, services, projects and investments are prioritized and aligned with organizational priorities and oversee the application of approved policies, processes, procedures and standards. This framework will provide decision-making mechanisms through clear responsibilities and rules, thus facilitating proactive management and risk mitigation.

IT Steering Committee (Monthly)

KCS - CIO	MBTA - CIO
KCS - Business Executives	MBTA - Business Executives

- Approves the multi-year IT strategy road map supported by an investment budget
- Provide leadership and direction to all areas of IT investments including confirmation of IT project prioritization, evolution and cancellation
- Approves the IT tactical plan deriving from the strategic road map
- The CIO shall manage these meetings and report on each to all Board members.
- KCS will require that any changes be approved by this Board prior to implementation.

Change Control Board (Monthly)

KCR - Business Solution Director	MBTA - Business Solution Director
KCS - Business Contributors	MBTA - Business Contributors
KCS - IT Managers	MBTA - IT Managers

- Makes decisions regarding whether or not proposed changes to a software project should be implemented
- Prioritize change requests and communicate decisions to business stakeholders
- The IT Change Control Board will meet monthly to review any recommended changes to the Commuter Rail IT Environment.
- KCS will require that changes be approved by this Board prior to implementation.

In Process Review — Operation and Projects (Weekly)

KCS - Business Analyst	MBTA- business Solution Analyst
KCS - Business Contributors	MBTA - Business Contributors
KCS - Project Managers	MBTA - IT Managers

- In Process Reviews (IPRs) are ongoing status updates to high severity issues prior to resolution.
- The MBTA and KCS will review all issues of severity levels of 1 or 2 to discuss resolution issues and resulting root cause analyses after resolution.
- Quality Assurance will be applied to these and other processes to standardize the way issues are communicated, how they are documented, how they are resolved and to update quality documentation on any that will require change as a result.

Figure 9-11: IT Governance Framework

9.A.10. Complying with MBTA and Other Applicable Standards

We will continuously monitor regulatory changes and ensure compliance of our IT function with MBTA policies and procedures, industry practices and other applicable standards. We will also continuously monitor and assess areas of compliance risk across the IT function and look for ways to improve IT security. We will follow all applicable MBTA standards for performance of the Service.

Our CIO will develop an IT service strategy that is either based on or similar in organization to the ITIL service strategy guidelines and MBTA Security Standards (NIST publications and ISO27002).

We will also comply with industry standards for security, interoperability, software development and open systems architectures. Some examples include:

- Security Standards are in some cases very specific especially as it concerns credit card payment and personal information. We will follow all applicable PCI-DSS requirements. A baseline audit will be performed to assess the exposure. Solution selection will leverage the use of service providers that are PCI-DSS compliant. All payment solution developed internally will incorporate all of PCI-DSS requirements and will be audited on a yearly basis to ensure compliance.
- Open Enterprise Architecture Standards (using the TOGAF framework as a baseline)
- Open Architecture Standard Interfaces standards
- MBTA Change procedures

We will set up processes to identify, control, and minimize the impact of IT operational risks to ensure business continuity and value creation, following among other frameworks the standards covered by ISO/IEC 27005 and NIST SP 800 30 framework. Major elements addressed while managing the risks will be:

- Risk assessment, as derived from an evaluation of threats and vulnerabilities
- Management decision
- Control implementation
- Effectiveness review

9.A.11. Applying Sound Change Management, Project Management, and Configuration Management Practices

Our project portfolio and management framework was illustrated in sections 9.A.II.b.5 - 9.A.II.b.7. The following comprise the major components of our portfolio and program management process, based on industry standards and our experience.

- We will manage all business transformation, business enhancement and IT projects through project portfolios, using well-established frameworks and standards, more specifically the PMBOK published by the Project Management Institute (PMI).
- Our portfolio management process will provide a mechanism for the identification and reporting of all project information and metrics throughout the project's lifecycle. Moreover, it will ensure that information for current as well as future projects is readily available to appropriate levels of management, as needed. It will provide the required visibility to effectively manage project interdependencies and will ensure proper accountability for the on-time and on-budget execution of projects.
- Project portfolios and their underlying projects will be in line with the overall strategic objectives of the MBTA and will allow us to regularly review entire portfolios, allocate resources appropriately and adjust projects to produce the highest returns.
- We will manage and monitor each project in every project portfolio across all phases of its lifecycle: Conceptualization, Initiation, Analysis & Design, Development, QA & Testing, Implementation and Post-Implementation:
  - The Conceptualization phase presents an idea or concept of a potential project to be carried out. These concepts will require collaborative discussions in order to fully develop the details supporting the potential project. During this phase, we

will prepare a *New Project Request (NPR)* that includes: Description of Initiative, Background & Strategy, Project Scope, Options & Recommendations, Cost/Benefit Analysis, Schedule, and Risk Factors.
  - Once a project is approved, we will begin the Initiation phase and the planning. Project initiation implies that a project is formally kicked off, and a project manager (or business lead) will officially be assigned at this time. During this phase we will deliver the following components: Project Charter, Communication Plan, Project Kick-Off Meeting, Project Plan, Issues / Risk Log, Meeting Agenda / Minutes, and Status Reporting.
- At the Analysis & Design phase, we will essentially determine the "What" of a project. What should be carried out in order to realize maximum project efficiencies? The project kick-off meeting, from the initiation stage, is coupled with subsequent collaboration meetings (with all appropriate stakeholders) to analyze and determine the best approach for the project. The project manager will facilitate discussions and document the approach accordingly within the project plan. During this phase we will deliver the following components: Project Plan (adjustment and update), Change Control, Requirements Documentation, Issues / Risk Log (throughout project lifecycle), and Meeting Agenda / Minutes (throughout project lifecycle).
- During the Development phase, we will carry out what was predetermined in the Analysis & Design phase. Development is essentially the "creation" of the main components of the project. We aim to execute this phase as effectively and efficiently as possible while closely adhering to the scope of the charter and the defined deliverables. During this phase, we will carry out the following components: Project Management Plan (Evolutions), Change Control (as needed), Issues / Risk Log (throughout project lifecycle), and Meeting Agenda / Minutes (throughout project lifecycle).
- For the QA & Testing phase, we will ensure that the output from the development phase does not contain any unacceptable errors or quality issues. During this phase we will carry out the following components: Test Strategy, Quality Assurance (QA), Project Management Plan (Further evolution of the project plan to monitor and control progress), Change Control (as needed), Issues / Risk Log (throughout project lifecycle), and Meeting Agenda / Minutes (throughout project lifecycle).
- At the Implementation phase, we will implement/ execute upon the output from the QA & Testing phase. At this stage, all the appropriate planning and testing has been completed and the product, service or process is now ready to be rolled out to the intended audience. During the implementation phase, we will complete the following components: Communication Plan, Contingency Plan, Project Management Plan (Further evolution of the project plan to monitor and control progress), Change Control (as needed), Issues / Risk Log (throughout project lifecycle), and Meeting Agenda / Minutes (throughout project lifecycle).
- Finally, at the Post-Implementation phase, we validate results from the Implementation phase. The goal is to confirm if execution went according to plan and whether it accomplished all of the objectives identified in the project charter. This is the phase where a project is officially signed-off on by the sponsor and ultimately closed. It also provides an opportunity to identify areas where similar future projects can be executed upon in a more effective manner. During this phase, we will deliver the following components: Lessons Learned, Project Closure Report, Project Management Final Plan.

We use Systems Development Life Cycle (SDLC) processes and procedures to interface directly with operational IT processes and successfully plan for and deliver full-scale system development initiatives as well as intermediate bug fixes to an organization's IT environment. Some key components covered by our SDLC are: development and configuration processes, integration activities, quality control, and structured solution deployment. Our ITP platform supports configuration management. For more detail on SDLC see section 9.A.II.b.9.

9.A.12. Operating an IT Service Center and Responding to and Repairing Reported Problems

We will staff and manage the IT Service Center as described in the RFP. Issues reported to our IT service representatives will be logged, have a ticket generated and be tracked through resolution via the Issue Tracking Portal (ITP, 9.A.I.a.4). SLA-related issues will be escalated according to severity, with safety and mission-critical system and application issues receiving the highest resolution priorities. The ITP will also support Customer Services and other workstreams that have been integrated into the system. For non-IT issues, the department responsible will be informed of the issue immediately via ticket.

IT issues will be addressed directly by IT staff or product support representatives from suppliers. All critical issues will be responded to within timeframe guidelines specified by Service Level Agreements. Critical systems will be designed with redundancy and failover capabilities to prevent down time.

IT Operator Service Center representatives will be trained both technically and in customer service communications skills to provide an effective first line of support for resolution or accurate assessment and logging of critical issues and appropriate timely action.

A set of policies and procedures will be developed that provide directions for routing issues to the proper source, recognizing issue severity, accurately reporting issues and updating issue status, and archiving issues in the Document Repository. Policies and procedures will also define appropriate responses and behavior of representatives in the course of business. All policies and procedures will be documented as part of Quality Assurance program.

Business Continuity and Disaster Recovery

IT Operator Service Center representatives will also be trained to recognize and initiate disaster recovery procedures in the event of catastrophic system failures. We will develop a Disaster Recovery Plan to ensure IT infrastructure and solutions continuity that mitigates the impact of possible risks on business continuity. This plan shall be integrated within the framework of a global business continuity plan that shall be adopted by the entire organization. Figure 9-12 illustrates a timeline common to disaster response and recovery. Note that temporary fixes may be implemented as stopgap measures to reduce the

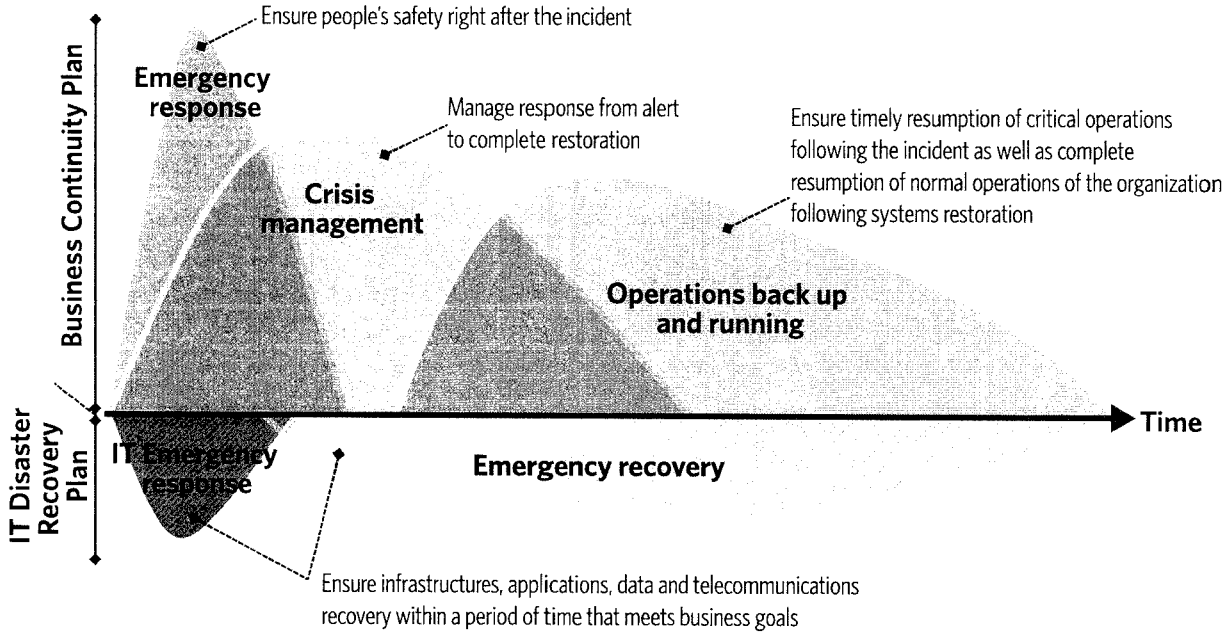

Ensure people's safety right after the incident
Emergency response
Manage response from alert to complete restoration
Ensure timely resumption of critical operations following the incident as well as complete resumption of normal operations of the organization following systems restoration
Crisis management
Operations back up and running
Business Continuity Plan
IT Disaster Recovery Plan
Time
IT Emergency response
Emergency recovery
Ensure infrastructures, applications, data and telecommunications recovery within a period of time that meets business goals

Figure 9-12: Representative Disaster Recovery Process

impact of critical failures even though full resolution occurs much later.

9.A.13. Performing Root Cause Analyses

We recognize that performing Root Cause Analysis is one of the essentials requirements in a quality system for continual improvement. Steps taken in the process include those below;

- Problem selection
- Problem statement
- Identify possible causes
- Implement corrective actions
- Analyze effectiveness
- Update procedures
- Check and control

A major benefit to a structured root cause analysis process is its link to the Quality Assurance program that will be put in place, and the resulting updates in processes and documentation that will be made after successful root cause analyses. This is a significant part of the effort to improve the organization continually.

Root cause analysis information in process will be communicated to the MBTA via IPRs with a frequency defined by the service level of the problem being addressed. Configuration planning is also an aide to resolving root causes as they reveal system dependencies and relationships that might otherwise be overlooked during analyses. The ServiceDesk Plus application we are recommending for the ITP platform supports Configuration Management. Root Cause Analysis is also discussed in section 9.A.I.h.

9.A.14. Developing and Implementing IT Asset Lifecycle Plans

IT Assets Lifecycle Management

We understand that IT asset lifecycle planning is an essential part of meeting the required level of service consistent with Service Level Agreements (SLAs). Life cycle planning, asset management, within the ISO quality context, involves the coordinated and optimized planning, asset selection, acquisition, development, utilization, care (maintenance) and ultimate disposal or renewal of assets and related systems.

Asset life cycles in the Commuter Rail IT Environment will be defined by the period during which equipment can be kept under support from its OEM at reasonable cost. Support services will allow our IT professionals to focus on providing value by running systems rather than fixing systems.

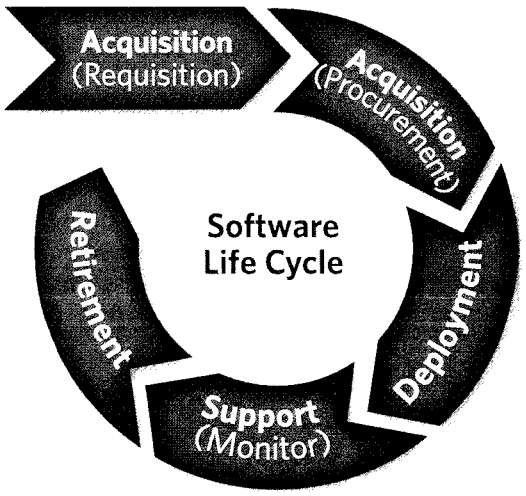


Figure 9-13: Software Life Cycle

Individual asset life cycles vary and the quality plan for each asset, or category of assets, will contain information on the useful life of the asset and information that will help assess an asset's condition by establishing asset performance. Records of the life cycle events of all equipment will be maintained for the development of performance data. This information will be accessible in the Digital Repository

Asset life cycle management is also an important part of the procurement process. Cost effective, high quality assets will be procured as older assets cycle out of the system. Break-even or ROI analyses will be applied to all assets to assess their true cost and value to the organization. This will be accomplished as part of the asset management quality plan.

Our Systems Development Life Cycle (SDLC) processes and procedures interface directly with IT operational processes to plan for

and deliver full-scale system development initiatives as well as intermediate bug fixes. Some key components covered by our SDLC are: development and configuration processes, integration activities, quality control, and structured solution deployment.

- Our SDLC framework includes the following activities:
  - Managing the life cycle for Analysis-Design-Build of system development including the management of outsourced or distributed development groups
  - Communication with designated business representatives during the definition of system requirements and the prototyping of interfaces
  - Coordination testing and integration activities with the Testing & Quality Control processes
  - Securing the necessary resources (people, hardware, software, documentation, etc.) to ensure development commitments
  - Ensuring the development environment's suitability for scheduled work

9.A.15. Implementing a Quality Assurance Program

To ensure that our IT department sustains and extends the organization's strategies and objectives, we will implement and apply industry standards and frameworks.

Supporting these efforts will be:

- The development of our Quality assurance program based on ISO quality standards and processes. The ISO process outline includes:
  - Control of Documents
  - Control of Records
  - Internal Audits
  - Control of Nonconforming Product / Service
  - Corrective Action
  - Preventive Action
- Improvement of the operational IT service management through ITIL framework
- Measuring the achievement of business and IT goals and identification of the business and IT process owners as well as the establishment of an internal control environment through COBIT framework
- Enterprise architecture design with the help of TOGAF toolsets
- Management of IT projects by PMP certified project managers
- Ensuring IT services compliance with quality assurance requirements through a Quality Control Plan
- Creation of a Software Configuration Management Plan to document the Commuter Rail IT Environment. The CM Plan will be useful for identifying assets and their relationships. This is especially useful in performing root cause analyses and determining dependencies between different elements of the IT environment.
- We use a Systems Development Life Cycle (SDLC) processes and procedures to interface directly with operational IT processes and successfully plan for and deliver full-scale system development initiatives as well as intermediate bug fixes to an organization's IT environment. Some key components covered by our SDLC are: development and configuration processes, integration activities, quality control, and structured solution deployment

9.A.16. Performing Monitoring and Reporting of Performance of IT Functions and Complying with Service Level Agreements

Our IT Service Offering

As the success of the strategic partnership between IT and business functions relies mainly on the ability of users to take advantage of a performing information system, the development of an IT service catalog is one of the cornerstones of our IT strategy (as promoted by the ITIL framework).

We have developed a service catalog by structuring the synergies between the various IT contributors through a transverse offering that addresses the needs of its diverse clients: MBTA, internal end-users and passengers.

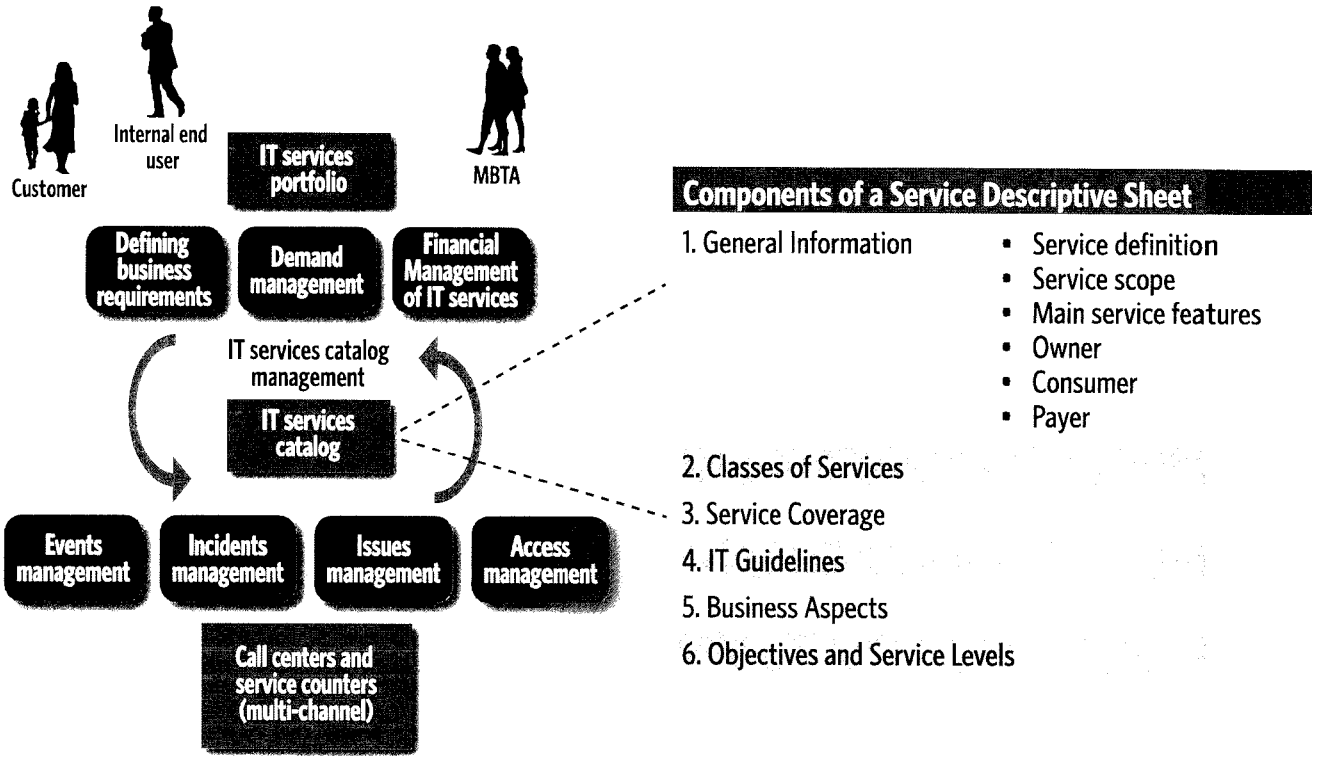


Figure 9-14: IT Service Catalog

The service catalog is a client-oriented communication tool, describing the IT services, the service levels and conditions (Figure 9-14).

To ensure the results match our expectations, we establish Key Performance Indicators (KPIs) that provide data to help us analyze our results. Within our culture of continuous improvement, all IT services are measured to ensure alignment with our company's goals, our financial performance and our customers' satisfaction. We follow tested methodologies, and measure the results to ensure their effectiveness and our ability to manage to them.

KPIs will be tracked through a dashboard that will include views of, the multi-year roadmap and tactical plan progress, IT services levels, IT financial, IT human capital indicators and more. (In management information systems, a dashboard is "an easy to read, often single page, real-time user interface, showing a graphical presentation of the current status (snapshot) and historical trends of an organization's key performance indicators to enable instantaneous and informed decisions to be made at a glance.")

Within our KPI framework, all Service Level Agreements will also be KPIs. For each KPI/SLA, we will access reliable data sources to provide comparisons of system statistics and performance measurements against defined Service Levels. The results of all KPI/SLA related data will be logged into the Digital Repository and readily accessible by the MBTA and us.

To ensure transparency and develop a strategic partnership between IT and business functions, the dashboard will be available in real time to the MBTA, other identified stakeholders and governance bodies.

Figure 9-15 provides some examples of other areas for which KPIs will be developed that we will track:

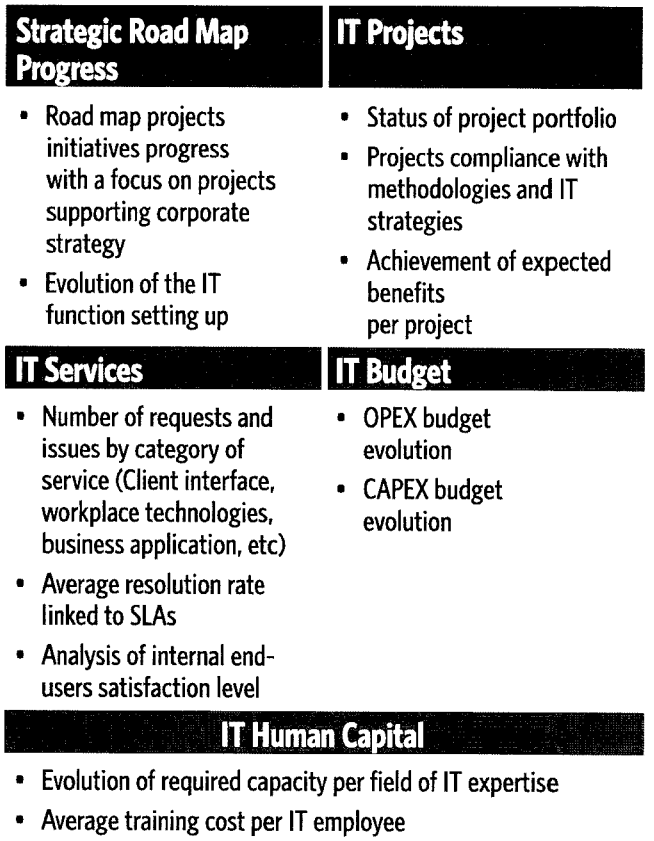

Strategic Road Map Progress
• Road map projects initiatives progress with a focus on projects supporting corporate strategy
• Evolution of the IT function setting up
IT Projects
• Status of project portfolio
• Projects compliance with methodologies and IT strategies
• Achievement of expected benefits per project
IT Services
• Number of requests and issues by category of service (Client interface, workplace technologies, business application, etc)
• Average resolution rate linked to SLAs
• Analysis of internal end-users satisfaction level
IT Budget
• OPEX budget evolution
• CAPEX budget evolution
IT Human Capital
• Evolution of required capacity per field of IT expertise
• Average training cost per IT employee

Figure 9-15: Areas for KPI Development

In summary, we will monitor and report the performance of IT functions to comply with Service Level Agreements, and we will configure software and systems to ensure the accurate evaluation of the related elements of the Commuter Rail IT Environment.

- We will implement IT and network management/monitoring (Whatsup Gold Enterprise, or equivalent) to record the performance of systems, networks and applications across the Commuter Rail IT Environment.
- Performance metrics will be filtered, analyzed and reported monthly to establish baseline metrics for performance comparisons over time and establish quality milestones to ensure that Commuter Rail IT systems meet Quality standards and Service Level Agreements.
- Performance logs will be archived within the Digital Repository and will be accessible by the MBTA and our IT professionals.
- Ongoing performance monitoring will be done via a dashboard approach and conditions will be visible at all times to our Operator Service Center personnel.

9.A.17. Providing Appropriate and Timely Access to MBTA to Operator IT Staff and Systems

Operations - Access

As mentioned previously, we believe in transparency as part of its partnership with the MBTA. This partnership could not be possible without easy access by the MBTA to the Commuter Rail IT Environment and our staff who are providing the IT services.

Our IT staff will, at all times, view the MBTA as its customer. Customer service will be the highest priority professionally and in support of all Service Level Agreements.

We will comply and provide all access and rights to MBTA to all systems as requested by MBTA.

9.A.18. Negotiating and Managing Contracts with IT Suppliers Responsibly and by Seeking the Best Value at All Times

Part of our proposed IT Strategy will be to establish cost savings initiatives for IT sourcing as key enablers of value creation (Figure 9-16). Related information is also available in section 9.A.III.

We will perform a comprehensive assessment of the current Commuter Rail IT delivery model against the dimensions of efficiency, sourcing viability and risks. Then we will develop potential sourcing scenarios focusing on their suitability to meet IT and business needs. After comprehensive risk analyses, the most appropriate scenarios will be proposed to the MBTA for selection and approval, to finalize the optimal sourcing strategy for the Commuter Rail IT function.

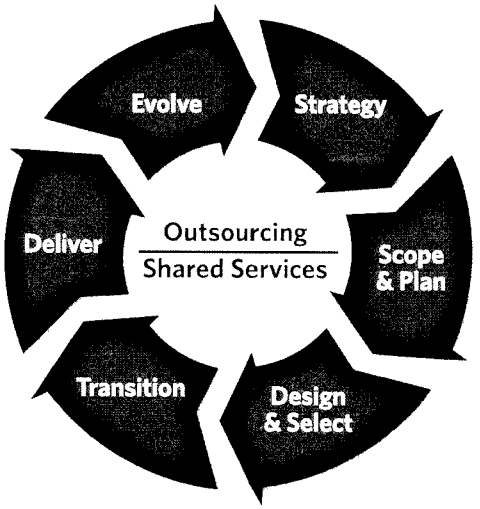


Figure 9-16: IT Sourcing

Our Guiding Principle Underlying IT Sourcing Strategy

- Evaluate the maturity of current sourcing approach on a regular basis and benchmark it against industry best practices
- Establish sourcing strategies with controls over implementation and management to reduce concerns about numerous sourcing alternatives
- Increase the benefits that can be realized from shared services, outsourcing, and multi-vendor arrangements
- Identify and manage sourcing risks throughout the entire sourcing life cycle

We use KPIs to measure performance of the suppliers through our contractual agreement.

Suppliers tend to fragment their relations with clients to increase their overall sales into different departments or divisions of a company, reducing volume pricing to maximize their revenue. In this context, we believe that centralizing supplier's relationship would force them to negotiate globally and ensure the same quality of services to all departments. Moreover, we will put in place the following practices and requirements:

- An integral part of our QA program will extend to its suppliers. As the supplier audit, evaluation and selection process is the first step in establishing value.
- Ideally, the suppliers selected will be ISO certified. Working with suppliers who have developed quality programs can only increase value of their products and/or services.

9.B. BEST PRACTICES SUPPORT

Our innovations, initiatives and best practices for improving the IT function of the MBTA Service are summarized in Figure 9-17:

Our Best Practices

Initiative	Innovative	Best Practice	Beneficial to MBTA Customers	Cost Efficient	Support
IT Systems, Networks, and Applications Mapping		✓	✓	✓	9.A.3.1.
IT Roadmap		✓	✓	✓	9.A.8. and 9.A.16.
IT Architecture Principles		✓	✓	✓	9.A.II.a.1.
IT Steering Committee	✓	✓	✓	✓	9.A.9.
Cloud Based Applications and Services	✓	✓	✓	✓	9.A.1.e.
Issue Tracking Portal	✓		✓		9.A.1.e.
Digital Repository		✓	✓	✓	9.A.1.e.
Interactive Voice Response		✓	✓		9.A.1.e.
RFID Technology	✓		✓		9.A.1.e.
IT Change Control and Committees	✓	✓	✓	✓	9.A.9.
GIS Software for Environment and Engineering	✓	✓	✓	✓	9.A.9.1.e
Implement Standards and Methodologies	✓	✓	✓	✓	9.IV.
Renew Infrastructure		✓	✓	✓	9.IV.
Quality Assurance and Control		✓	✓	✓	9.A.II.b.6.
IT Department Reorganization	✓	✓	✓	✓	9.A.8.
PMI Portfolio and Program Management		✓	✓	✓	9.A.II.a.3.
Applications and Systems Interfaces Delivery		✓	✓		9.A.I.
Information Security		✓	✓		9.A.I.6.
Asset Life Cycle Management		✓	✓	✓	9.A.14.
Disaster Recovery Planning		✓	✓	✓	9.A.12.
Root Cause Analyses		✓	✓	✓	9.A.13.
Policies and Procedures		✓	✓	✓	9.A.I.a. and 9.A.II.b.2.

Figure 9-17: Best Practices Support – IT

SECTION 10

Disadvantaged Business Enterprises Plan and Program Evaluation Factor Information

SECTION 10 — DISADVANTAGED BUSINESS ENTERPRISE (DBE) PLAN AND PROGRAM EVALUATION FACTOR INFORMATION

Contents

10. INTRODUCTION 2
- I. Executive Summary 2
- II. The MBTA's Objectives as We Understand Them 2
- III. Our Assessment of the Current Situation 4
- IV. The Results We Will Deliver 4

10.A. DBE PLAN 5
10.B. DBE UTILIZATION CERTIFICATE 6
10.C. DBE LETTERS OF INTENT 19
10.D. CERTIFICATION LETTERS 19
10.E. ORIGINAL DBE AFFIDAVITS REGARDING CHANGE IN DBE STATUS 19
10.F. DOCUMENTATION OF GOOD FAITH EFFORTS 19
10.G. BEST PRACTICES SUPPORT 22

INTRODUCTION

I. Executive Summary

We commit to **Moving Further Together** with the MBTA to ensure that our DBE programs fully achieve the goals of diversity, community involvement, and inclusiveness for our team providing the MBTA service. As part of this, we will communicate consistently and openly with the MBTA's Office of Diversity and Civil Rights (ODCR)/MassDOT Supplier Diversity Office (SDO) and submit all required reports in a timely manner.

We firmly believe that providing a level playing field for DBEs will not only benefit the local Boston area, but will also have added value for our operation of the MBTA Service. We will benefit from working with local suppliers and subcontractors, as they will have a personal interest in the efficient running of the MBTA Service. We will also be able to use their insight into the needs of the local community, to assist us in implementing our "Think like a Passenger" program described in Section 8 Management Plan and providing the best possible service for the MBTA's customers.

Our pledge to the MBTA is that we will exceed the MBTA's targets for DBE participation and we will commit to maintaining those levels throughout the term of the contract. We expect, furthermore, that the scope of services involved in providing the MBTA Service will evolve and change over time, producing new, meaningful areas where DBEs can be utilized and can make an even more important contribution to service delivery than is the case at present.

We will, in fact, encourage subcontracting, mentoring and partnering opportunities with DBEs throughout the term of the contract. As part of this commitment, we have met with Michelle N. Morin, Management Analyst, and Reginald A. Nunnally, Executive Director of the SDO, who responded positively to our offer to involve the SDO in our compliance efforts and to use their expertise to assist in achieving higher levels of DBE participation in the MBTA Service.

We are also already assisting deserving firms, such as FM & M, which is presented below, to qualify as DBEs, pursuant to the passage of legislation which would allow this to happen. FM & M, a wholly-owned subsidiary of Work, Inc., has a workforce of several hundred members, all from the disabled community, and gives 100% of its profits to that community.

This section of our proposal shows that we have complied with the DBE participation goal of 15 percent of the goods and services subcontracted out, have conducted and will continue conducting good faith efforts in order to exceed this result, including but not limited to hosting more than one outreach event. In addition to describing our actions and initiatives during the bidding phase, we outline our ongoing creative outreach efforts which will enable us to continue to comply with the 15 percent participation goal throughout the life of the contract.

Part A of this Plan contains our DBE Plan and Program, which complies with the Federal DBE Program and its implementation through the MBTA's DBE Program, and which includes creative strategies and approaches to exceed mere compliance over the contract term, including technical assistance and supportive services strategies designed to increase participation and build capacity in the DBE community.

We have entered into a variety of subcontracting arrangements with certified DBEs.

The total value of these subcontracts is $10,103,808, which represents 17% of the total value of subcontracted services.

In addition to these subcontracts, during Mobilization we will encourage the subcontractors who have committed to the incumbent to propose their services to us.

II. The MBTA's Objectives as We Understand Them

We understand that the MBTA's objectives for the involvement of DBEs in the MBTA Service are focused around the following main areas:

The MBTA's Objectives	Our Track Record and How We Will Deliver These Objectives
To identify Proposers that comply with **DBE goals or conduct good faith efforts** to do so	We have complied with the 15 percent participation goal set for this contract and are committed to providing opportunities for certified DBEs. We have conducted the following good faith efforts during the bidding period: • Held 2 outreach events in Lowell and central Boston • Contacted the SDO to explore offering accelerated DBE applications, participating in DBE training programs and developing mentoring opportunities • Contacted DBEs on the ODCR/SDO directory identifying all firms eligible to participate as DBEs • Have been in regular contact with DBEs who have expressed an interest in working with us on the MBTA Service procurement
To identify Proposers that have submitted a **quality DBE Plan** that complies with both the Federal DBE Program and the MBTA's DBE Program requirements	We have submitted, as part of this Section, a high quality DBE Plan which complies with all relevant Federal DBE Programs and the MBTA's DBE Program requirements.
To identify Proposers with creative strategies and approaches to achieve and maintain compliance over the contract term, including technical assistance and supportive services strategies designed to increase participation and build capacity in the DBE community	In addition to the good faith efforts listed above and explained in more detail below, we will use the following creative approaches and strategies to ensure that DBE participation is maintained throughout the life of the contract: • Defining a corporate procurement strategy for KCS which details our objectives for sustainable procurement, including providing supply chain opportunities for DBEs in the local area, as well as monitoring and reporting on our procurement activities • Contacting the SDO to explore offering accelerated DBE applications, participating in DBE training programs and developing mentoring opportunities • Creating and publishing a Joint Business Guide, which explains the rights and responsibilities of our subcontractors, on our web-based procurement portal • Informing DBEs about subcontracting opportunities, upcoming projects and our bidding process via our web-based procurement portal, emails and newsletters • Working with a certified DBE firm to help manage our DBE Plan, contact local DBEs and conduct outreach events • Inviting DBEs to contact us via our web-based procurement portal to explore potential future business opportunities • Attending any DBE networking events organized by the MBTA and organizing a host of similar events ourselves • Requiring our subcontractors to meet goals for DBE involvement in all work they subcontract • "Unbundling," or breaking larger projects into several smaller projects sized so that DBEs might bid on them as prime contractors • Allowing consortia or joint ventures of small businesses to bid as prime contractors • Making our training offer available to employees of our subcontractors to help them develop their skills and benefit from a larger company's buying power • Contacting the ODCR/SDO to explore offering accelerated DBE applications, participating in DBE training programs and developing mentoring opportunities

Figure 10-1: The MBTA's Objectives

continues next page

The MBTA's Objectives	Our Track Record and How We Will Deliver These Objectives
To identify Proposers that will commit to consistent and open communication with the ODCR/SDO and timely submission of monthly reports and updates regarding full implementation of the DBE Plan	• We commit to **Moving Further Together** with the MBTA, and one of the ways in which we will do so is ensuring an open line of communication between our DBE Liaison Officer (DBELO) and the ODCR/SDO. Our DBELO will submit monthly reports and updates regarding implementation of the DBE Plan; will, during Mobilization, set a schedule of meetings with the MBTA; will respond to all requests from the MBTA in a comprehensive and timely manner; and will support the MBTA's DBE efforts. The DBELO will also have a direct connection to our General Manager. • We will contact the ODCR/SDO to explore offering accelerated DBE applications, participating in DBE training programs and developing mentoring opportunities

Figure 10-1: The MBTA's Objectives, cont.

III. Our Assessment of the Current Situation

The incumbent works with a number of DBEs on the provision of services and materials for the MBTA Service. Although these companies were not in a position to provide pricing and proposals to us, we will use Mobilization to contact these suppliers and subcontractors and ensure that they have the opportunity to propose their services.

We were also surprised to hear, when we met with the SDO, that there seems to be no communication between the incumbent and the SDO (reporting, mentoring, etc.). We will use the SDO's support that was kindly offered to us to promote and develop DBE opportunities

IV. The Results We Will Deliver

Our subcontracting and supplier strategy will Our subcontracting and supplier strategy will include a DBE Plan, which will achieve the following results:

- Exceeded DBE participation goal of 15 percent of the goods and service subcontracted out, throughout the duration of the contract.
- Continued outreach efforts, by committing to actively seeking local vendors and DBEs who may wish to be part of a larger contract or framework agreement. We will attend outreach and networking events organized by the MBTA, as well as organizing similar events ourselves.
- Development of mentoring programs in partnership with the ODCR/SDO (we are currently supporting FM & M's application).
- Implementation and maintenance of an effective performance management system, to ensure that we understand the impact of our procurement on the local community.
- Clarification of the requirements of being a supplier to KCS through a Joint Business Guide: During Mobilization we will draft a Joint Business Guide which will detail the requirements of being a supplier to KCS and will be included on our website. This will state that suppliers are required to:
  - Comply with all relevant legislation at all times, including employment law and health and safety regulations
  - Demonstrate their commitment to providing equal opportunities to candidates identified by local employment and development agencies in their recruitment and selection process
  - Ensure that they work in partnership with their own suppliers and subcontractors and ensure they are paid in a timely manner.
- Advertising information on supply chain Advertising information on supply chain opportunities: We will publish updated information on corporate contracts due for renegotiation on our web-based procurement gateway (http://keoliscommuterservices.com), where businesses will be able to register their interest in revenue or capital contracts. We will advertise our upcoming contracts

on our website, in local newspapers and in relevant trade journals, and will provide links to opportunities. In addition to this, we will include a list of key contacts for each current supplier contract and subcontracted service, to encourage second and third tier potential suppliers to contact key suppliers and work in collaboration. Details for the suppliers with the largest contract values will be available through our website.

10.A. DBE PLAN

Our DBE Plan and Program is included below. It describes in detail how we will:

- **Effectively implement and monitor our DBE subcontracting and supplier strategy**

  Our Director - EEO, Diversity and DBE Management will be our dedicated DBE Liaison Officer (DBELO) and will be responsible for developing, implementing and monitoring our DBE subcontracting and supplier strategy, including the DBE program, in coordination with other appropriate officials. The DBELO will:
  - Keep a running tally of actual payments to DBE firms for work committed to them at the time of contract award
  - Ensure that work committed to DBEs is actually performed by the DBEs
  - Bring to the attention of the ODCR/SDO any false, fraudulent or dishonest conduct in connection with the program
- **Manage, monitor, and report on DBE participation on a monthly basis**
  - We will submit monthly written reports to the MBTA that summarize our total expenditure through DBE firms
  - We will submit reports and other correspondence to the DBELO, with copies provided to the Senior Director of Rail and Water Transportation and the Chief Procurement Officer
  - We will maintain all data/records pertaining to DBEs and all data/records pertaining to non-DBE subcontracting and purchasing as required, and will report these to the MBTA on a monthly basis
- **Ensure that our DBE Liaison Officer and Program representatives interface with the MBTA**

  We are committed to consistent and open We are committed to consistent and open communication with the ODCR/SDO and timely submission of monthly reports and updates regarding implementation of the DBE Plan. In addition to the monthly reporting, we will work with the MBTA to set a schedule of meetings between our DBELO and Program representatives, and the MBTA during Mobilization. Our DBELO is fully committed to ensuring an open line of communication with the MBTA and will respond to the MBTA's requests in a timely and comprehensive manner. This will allow us and the MBTA to ensure we are constantly **Moving Further Together**.
- **Implement good faith efforts throughout the life of the contract**

  The good faith efforts we will implement throughout the life of the contract include:
  - Creating and publishing a Joint Business Guide, which explains the rights and responsibilities of our subcontractors, on our web-based procurement portal (http://keoliscommuterservices.com)
  - Informing DBEs about subcontracting opportunities, upcoming projects and our bidding process via our web-based procurement portal, emails and newsletters
  - Working with a certified DBE firm to help manage our DBE Plan, contact local DBEs and conduct outreach events
  - Making the procurement process more transparent by providing DBEs with information on prime contractors who are bidding and are awarded work, so DBEs can know who to contact and partner with in advance, and creating an "Interested Subcontractor Database" of DBEs where prime contractors will be able to find information about DBE firms for potential subcontracting opportunities

- Inviting DBEs to contact us via our web-based procurement portal to explore potential future business opportunities
- Attending any DBE networking events organized by the MBTA, and organizing our own outreach informational meetings in communities around the state to identify qualified DBE bidders and disseminate information
- Requiring our subcontractors to meet goals for DBE involvement in all work they subcontract, and to report the names/addresses, and other pertinent information, of all firms who quote to them on subcontracts
- "Unbundling," or breaking larger projects into several smaller projects sized so that DBEs might bid on them as prime contractors
- Allowing consortia or joint ventures of small businesses to bid as prime contractors
- Making our training offer available to employees of our subcontractors to help them develop their skills and benefit from a larger company's buying power
- Creating and maintaining a bidders list, consisting of information about all DBE and non-DBE firms that bid or quote on MassDOT/U.S. DOT-assisted contracts
- Developing joint mentoring programs with the SDO

- **Provide technical assistance to DBEs**

  We will provide technical assistance to DBEs, including:

  - Making our training offer available to employees of our subcontractors to help them develop their skills and benefit from a larger company's buying power
  - Facilitating the transition from M/WBE status to certification as a DBE, by providing information on the process and contact person at the ODCR/SDO
  - Investigating the full extent of services offered by financial institutions owned and controlled by socially and economically disadvantaged individuals in the community, to make reasonable efforts to use these institutions, and to encourage subcontractors and DBEs to make use of these institutions
  - Assessing the needs of our DBE community and DBEs generally on an annual basis, and providing other technical assistance to address specific issues, based on the assessments

10.B. DBE UTILIZATION CERTIFICATE

The DBE Utilization Certificate is included in Binder 2 — Forms and Appendices Related to Disadvantaged Business Enterprises Plan.

DISADVANTAGED BUSINESS ENTERPRISE PLAN POLICY STATEMENT

Section 26.1, 26.23 Objectives/Policy Statement

Keolis Commuter Services has established a Disadvantaged Business Enterprise (DBE) program in accordance with regulations of the Massachusetts Department of Transportation (MassDOT) and the U.S. Department of Transportation (U.S. DOT), 49 CFR Part 26. Keolis Commuter Services may receive funding from MassDOT and Federal financial assistance from the U.S. Department of Transportation, and as a condition of receiving this assistance, Keolis Commuter Services will sign an assurance that it will comply with 49 CFR Part 26.

It is the policy of Keolis Commuter Services to ensure that DBEs as defined in Part 26, have an equal opportunity to receive and participate in MassDOT /U.S. DOT-assisted contracts. It is also our policy:

1. To ensure nondiscrimination in the award and administration of MassDOT or U.S. DOT-assisted contracts;
2. To create a level playing field on which DBEs can compete fairly for MassDOT/ U.S. DOT-assisted contracts;
3. To ensure that the DBE Program is narrowly tailored in accordance with applicable law;
4. To ensure that only firms that fully meet 49 CFR Part 26 eligibility standards are permitted to participate as DBEs;
5. To help remove barriers to the participation of DBEs in MassDOT/U.S. DOT assisted contracts;
6. To assist the development of firms that can compete successfully in the marketplace outside the DBE Program.

The Director for Equal Employment Opportunity, Diversity and DBE Management (Director of EEOD & DBE Management) has been delegated as the DBE Liaison Officer. In that capacity, Director of EEOD & DBE Management is responsible for implementing all aspects of the DBE program. Implementation of the DBE program is accorded the same priority as compliance with all other legal obligations incurred by Keolis Commuter Services in its financial assistance agreements with the MassDOT and the U.S. DOT.

Keolis Commuter Services has disseminated this policy statement to the governing board of the Company and all of the components of our organization. We have distributed this statement to DBE and non-DBE business communities that perform work for us on DOT-assisted contracts. Distribution is achieved by incorporation into or by reference in the contract documents, and publication on our corporate website.

[Signature of Keolis Commuter Services General Manager] Date:

SUBPART A - GENERAL REQUIREMENTS

Section 26.1 Objectives

The objectives are found in the policy statement on the first page of this program.

Section 26.3 Applicability

Keolis Commuter Services is the recipient of federal transit funds authorized by Titles I, III, V, and VI of ISTEA, Pub. L. 102-240 or by Federal transit laws in Title 49, U.S. Code, or Titles I, II, and V of the Teas-21, Pub. L. 105-178.

Section 26.5 Definitions

Keolis Commuter Services will adopt the definitions contained in 49 CFR Part 26, Section 26.5 for this program.

Section 26.7 Non-discrimination Requirements

Keolis Commuter Services will never exclude any person from participation in, deny any person the benefits of, or otherwise discriminate against anyone in connection with the award and performance of any contract covered by 49 CFR Part 26 on the basis of race, color, sex, or national origin.

In administering its DBE program, Keolis Commuter Services will not, directly or through contractual or other arrangements, use criteria or methods of administration that have the effect of defeating or substantially impairing accomplishment of the objectives of the DBE program with respect to individuals of a particular race, color, sex, or national origin.

Section 26.11 Record Keeping Requirements

Reporting to MassDOT and U.S. DOT: 26.11(b)

We will report DBE participation to MassDOT and U.S. DOT as follows:

Keolis Commuter Services will report DBE participation on a quarterly basis, using DOT Form 4630. These reports will reflect payments actually made to DBEs on MassDOT and U.S. DOT-assisted contracts.

We will submit monthly written reports to the MBTA that summarize the total expenditure through DBE firms under this Agreement. These reports shall provide the following details:

- DBE utilization goal established for the Agreement and level of expenditure relative to that goal, expressed as a percentage for the month;
- Total value of expenditures with DBE firms for the month; and
- Total value of expenditures with DBE firms from inception of the Agreement. Keolis Commuter Services will submit reports and other correspondence to the DBE Liaison Officer, with copies provided to the Senior Director of Rail and Water Transportation and the Chief Procurement Officer.

Reports shall continue to be submitted monthly until final payment is issued or until DBE participation is completed.

We will maintain:

- All data/records pertaining to DBEs as stated in Schedule 3.14 (Reporting and Submittals)
- All data/records pertaining to non-DBE subcontracting and purchasing as required and reported to MBTA on a monthly basis

We are committed to consistent and open communication with the Office of Diversity and Civil Rights

and timely submission of monthly reports and updates regarding implementation of the DBE Plan.

Bidders List: 26.11(c)

Keolis Commuter Services will create and maintain a bidders list, consisting of information about all DBE and non-DBE firms that bid or quote on MassDOT/U.S. DOT-assisted contracts. The purpose of this requirement is to allow use of the bidders list approach in calculating overall DBE goals. The bidders list will include the name, address, DBE/non-DBE status, age, and annual gross receipts of firms.

We will collect this information in the following ways:

- Identification of DBEs who perform appropriate scopes of work, enlisting the assistance of organizations that promote or whose membership comprise DBEs, including but not limited to the Mass Minority Contractor's Association, the Greater New England Minority Supplier Development Council and the Massachusetts Supplier Diversity Office
- A survey of DBE firms to determine interest and to obtain age/size information
- Outreach informational meetings held in communities around the state to identify qualified DBE bidders and disseminate information
- A contract clause requiring prime bidders to report the names/addresses, and other pertinent information, of all firms that quote to them on subcontracts
- A notice in all solicitations, and otherwise widely disseminated, with a request to firms quoting on subcontracts to report information directly to Keolis Commuter Services, etc.

Section 26.13 Federal Financial Assistance Agreement

Keolis Commuter Services has signed the following assurances, applicable to all MassDOT/U.S. DOT-assisted contracts and their administration:

Assurance: 26.13(a)

Keolis Commuter Services and its contractors shall not discriminate on the basis of race, color, national origin or sex in the award and performance of any DOT-assisted contract or in the administration of its DBE Program or the requirements of 49 CFR Part 26, FTA's Civil Rights and DBE requirements, as well as the MBTA's policies regarding Civil Rights and DBE requirements.

Keolis Commuter Services shall take all necessary and reasonable steps under 49 CFR Part 26, FTA's Civil Rights and DBE requirements, as well as the MBTA's policies regarding Civil Rights and DBE requirements, to ensure nondiscrimination in the award and administration of DOT-assisted contracts. Keolis Commuter Services' DBE Program, as required by 49 CFR Part 26 and as approved by DOT, is incorporated by reference in this agreement. Implementation of this program is a legal obligation and failure to carry out its terms shall be treated as a violation of this agreement. Upon notification to Keolis Commuter Services of its failure to carry out its approved program, the Department may impose sanction as provided for under Part 26 and may, in appropriate cases, refer the matter for enforcement under 18 U.S.C. 1001 and/or the Program Fraud Civil Remedies Act of 1986 (31 U.S.C. 3801 et seq.).

This language will appear in financial assistance agreements with sub-recipients.

Contract Assurance: 26.13b

We will ensure that the following clause is placed in every MassDOT/U.S. DOT-assisted contract and subcontract:

The contractor, supplier, sub-recipient, vendor or subcontractor shall not discriminate on the basis of race,

color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as Keolis Commuter Services deems appropriate.

SUBPART B - ADMINISTRATIVE REQUIREMENTS

Section 26.21 DBE Program Updates

Since Keolis Commuter Services has received a grant of $250,000 or more in FTA planning capital and/or operating assistance in a federal fiscal year, we will continue to carry out this program until all funds from DOT financial assistance have been expended. We will provide to DOT updates representing significant changes in the program.

Section 26.23 Policy Statement

The Policy Statement is elaborated on the first page of this program.

Section 26.25 DBE Liaison Officer (DBELO)

We have designated the following individual as our DBE Liaison Officer:

Director of EEOD & DBE Management, 101 Federal St., Suite 1900, Boston, MA 02110
Tel.: (617) 312-1202; E-mail: DBE@KCS.com

In that capacity, the DBELO is responsible for implementing all aspects of the DBE program and ensuring that Keolis Commuter Services complies with all provision of 49 CFR Part 26. The DBELO has direct, independent access to the CEO of Keolis Commuter Services concerning DBE program matters. An organization chart displaying the DBELO's position in the organization is found below.

Director - EEO, Diversity and DBE Management

|

ADA Compliance Officer

Figure 10-2: DBE Organization Chart

The DBELO is responsible for developing, implementing and monitoring the DBE program, in coordination with other appropriate officials. The DBELO has a staff of one Compliance Officer (1) to assist in the administration of the program. The duties and responsibilities of the DBELO include the following:

- Gather and report statistical data and other information as required by MassDOT and U.S. DOT.
- Review third-party contracts and purchase requisitions for compliance with this program.
- Work with all departments to set overall annual goals.
- Ensure that bid notices and requests for proposals are available to DBEs in a timely manner.
- Identify contracts and procurements so that DBE goals are included in solicitations (both race-neutral methods and contract-specific goals attainment), and identify ways to improve progress.

- Analyze Keolis Commuter Services' progress toward attainment, and identify ways to improve progress.
- Participate in pre-bid meetings.
- Advise the CEO/governing body on DBE matters and achievement.
- Chair the DBE Advisory Committee.
- Provide DBEs with general information and assistance, including regarding obtaining bonding and insurance.
- Plan and participate in DBE training seminars.
- Act as liaison to the Uniform Certification Process and the Massachusetts Supplier Diversity Office in the Commonwealth of Massachusetts.
- Promote minority and woman-owned businesses, small businesses and other eligible providers of goods and services in obtaining DBE certification.
- Provide outreach to DBEs and community organizations to advise them of opportunities.
- Maintain the Keolis Commuter Services updated directory on certified DBEs.
- Conduct pre-bid contract package outreach review.

The duties and responsibilities of the Compliance Officer include:

- Monitor and enforce compliance with U.S. DOT's and FTA's Civil Rights and DBE requirements, as well as the MBTA's policies regarding Civil Rights and DBE requirements.
- Review contracting records.
- Track individual DBE commitments and attainments.
- Monitor the worksite.
- Conduct interviews to maintain contact and identify concerns.
- Conduct on-site and DBE office reviews of contracting DBEs to assess whether the DBE:
  a. Performs a commercially useful function
  b. Has the capacity to perform the contract
  c. Needs financial assistance or advice
  d. Needs technical assistance and may be appropriate for a mentor-protégé or other program
- Perform interim audits of contract payments to DBEs.
- Assess the compliance viability of joint ventures or partnerships.
- Track and review completion of No Change Affidavits and other submissions by DBEs.
- Provide weekly written report to the DBELO on the status of compliance.
- Assess overconcentration of DBEs and make recommendations of appropriate measures to address the overconcentration.
- Other tasks as required by the DBELO, U.S. DOT's and FTA's Civil Rights and DBE requirements, as well as the MBTA's policies regarding Civil Rights and DBE requirements.

Section 26.27 DBE Financial Institutions

It is the policy of Keolis Commuter Services to investigate the full extent of services offered by financial institutions owned and controlled by socially and economically disadvantaged individuals in the community, to make reasonable efforts to use these institutions and to encourage prime contractors on MassDOT and U.S. DOT-assisted contracts to make use of these institutions. We have contracted with specialists to identify and use such institutions.

To date, we have identified the following such institutions:

- One United Bank, 101 Franklin St., Boston, MA 02110
- Asian American Bank and Trust Co., 68 Harrison Avenue, Boston, MA 02111

Information on the availability of such institutions can be obtained from the DBE Liaison Officer.

Section 26.29 Prompt Payment Mechanisms

Keolis Commuter Services will include the following clause in each MassDOT and U.S. DOT-assisted prime contract:

The prime contractor agrees to pay each subcontractor under this prime contract for satisfactory performance of its contract no later than thirty (30) days from the receipt of each payment the prime contractor receives from Keolis Commuter Services. The prime contractor agrees further to return retainage payments to each subcontractor within thirty (30) days after the subcontractor's work is satisfactorily completed. Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written approval of Keolis Commuter Services. This clause applies to both DBE and non-DBE subcontracts.

Where applicable, the terms of the Massachusetts Prompt Payment Act (M.G.L. c. 149, sec. 29E) will be applied and enforced by Keolis Commuter Services. Applications shall be submitted on a cycle of no more than 30 days. The requisition then must be either approved or rejected within 15 days of submission. The period is extended by 7 days for each tier. Dispute resolution is allowed 60 days after rejection. **Failure to respond promptly to payment requisitions and change orders will result in those requisitions and change orders being deemed approved.** This clause applies to both DBE and non-DBE subcontracts.

Section 26.31 Directory

Keolis Commuter Services maintains a directory identifying firms eligible to participate as DBEs on the MBTA Rail Procurement contract. The directory lists the firm's name, address, phone number, date of the most recent certification and the type of work the firm has been certified to perform as a DBE. We update the directory every six (6) months. We make the directory available through the following methods:

- Mail: Keolis Commuter Services, 101 Federal St., Boston, MA 02110
- E-mail: DBE@KCS.com
- Web: http://keoliscommuterservices.com/dbecontact.html

Additionally, the Massachusetts Supplier Diversity Office maintains a directory identifying all firms eligible to participate as DBEs. The directory lists the firm's name, address, phone number, date of the most recent certification and the type of work the firm has been certified to perform as a DBE.

Keolis Commuter Services will participate in a combined statewide directory when the Uniform Certification Program becomes operational. At that time, this portion of the program will state how interested persons can obtain access to this combined directory.

Section 26.33 Overconcentration

Keolis Commuter Services has not identified that overconcentration exists in the types of work that DBEs perform.

Section 26.35 Business Development Programs

Keolis Commuter Services has an expanding business development program. The program seeks to increase capacity of DBEs and the percentage of contracts and contract value performed by DBEs. The program identifies bonding mechanisms to assist DBEs in expanding their capacity, such as the Massachusetts Growth Capital Corporation (formation of the MGCC involved consolidation of the Massachusetts Community Development Finance Corporation). The program also facilitates the transition from M/WBE status to certification as a DBE.

Section 26.37 Monitoring and Enforcement Mechanisms

Keolis Commuter Services implements the following monitoring and enforcement mechanisms to ensure compliance with 49 CFR Part 26:

1. We will bring to the attention of MassDOT any false, fraudulent or dishonest conduct in connection with the program, so that MassDOT can take the steps (e.g., referral to U.S. DOT or the Department of Justice for criminal prosecution, referral to the DOT Inspector General, action under suspension and debarment or Program Fraud and Civil Penalties rules) provided in 26.109.
2. We will consider similar action under our own legal authorities, including responsibility determinations in future contracts.
3. We will also provide a monitoring and enforcement mechanism to verify that work committed to DBEs at contract award is actually performed by the DBEs. This will be accomplished by on-site inspections of the work site, interviews of prime and lower tier subcontractors and workers, as well as review of financial records, if necessary.
4. We will keep a running tally of actual payments to DBE firms for work committed to them at the time of contract award.

SUBPART C - GOALS, GOOD FAITH EFFORTS, AND COUNTING

Section 26.43 Set-asides or Quotas

Keolis Commuter Services does not use quotas in any way in the administration of this DBE program.

Section 26.45 Overall Goals

Keolis Commuter Services is a FTA recipient and reasonably anticipates awarding $250,000 or less in FTA funds in prime contracts in a Federal fiscal year. It does not develop overall DBE goals for the fiscal year, pursuant to 49 CFR Part 26, Section 26.45.

Section 26.51(a-c) Breakout of Estimated Race-Neutral & Race-Conscious Participation

This section of the program will be updated annually when the goal calculation is updated.

Section 26.51(d-g) Contract Goals

Keolis Commuter Services will use contract goals to meet any portion of the overall goal Keolis Commuter Services does not project being able to meet using race-neutral means. Contract goals are established so that, over the period to which the overall goal applies, they will cumulatively result in meeting any portion of our overall goal that is not projected to be met through the use of race-neutral means.

We will establish contract goals only on those DOT-assisted contracts that have subcontracting possibilities. We need not establish a contract goal on every such contract, and the size of contract goals will be adapted to the circumstances of each such contract (e.g., type and location of work, availability of DBEs to perform the particular type of work).

We will express our contract goals as a percentage of the total amount of a MassDOT/U.S. DOT-assisted contract.

Section 26.53 Good Faith Efforts Procedures

Demonstration of good faith efforts (26.53(a) & (c))

Good Faith Efforts that Keolis will implement throughout the contract include creating an expanding business development program that:

- Increases the capacity of DBEs already performing work on the Project by:
  - Extending bonding to cover additional work; and
  - Assisting DBEs in attaining loans using present contracts as collateral.
- Increases the percentage of Project contracts performed by DBEs by:
  - Continuing outreach efforts;
  - Assessing all our contracts for opportunities-not just some; and
  - Reviewing lower tier contracts of the primes and actively imposing DBE goals.
- Increases the contract values performed by DBEs by:
  - Targeting DBEs to perform change orders, modifications and additions to contracts.
- Identifies bonding mechanisms in circumstances where bonding is required to assist DBEs in expanding their capacity by:
  - Providing access to bonding agencies;
  - Providing bonding training program as designed by U.S. DOT; and
  - Instituting a Prequalification process for DBEs.
- Facilitates the transition from M/WBE status to certification as a DBE by:
  - Identifying viable MBEs and WBEs for contracts;
  - Providing assistance and direction regarding the certification process; and
  - Collaborating with the Supplier Diversity Office DBE Specialist.

In order to actively impose DBE goals on primes, we will require bidders/offerors for our subcontracts to make good faith efforts. The bidder/offeror can demonstrate that it has done so either by meeting the contract goal or documenting good faith efforts. Examples of good faith efforts are found in Appendix A to Part 26.

The following personnel are responsible for determining whether a bidder/offeror who has not met the contract goal has documented sufficient good faith efforts to be regarded as responsive: Director for EEOD & DBE Management

We will ensure that all information is complete and accurate and adequately documents the bidder/offeror's good faith efforts before we commit to the performance of the contract by the bidder/offeror.

Information to be submitted (26.53(b))

Keolis Commuter Services treats bidders'/offerors' compliance with good faith efforts requirements as a matter of responsiveness.

Each solicitation for which a contract goal has been established will require the bidders/offerors to submit the following information:

1. The names and addresses of DBE firms that will participate in the contract;

2. A description of the work that each DBE will perform;
3. The dollar amount of the participation of each DBE firm participating;
4. Written and signed documentation of commitment to use a DBE subcontractor whose participation it submits to meet a contract goal;
5. Written and signed confirmation from the DBE that it is participating in the contract as provided in the prime contractor's commitment; and
6. If the contract goal is not met, evidence of good faith efforts.

Administrative reconsideration (26.53(d))

Within seven (7) days of being informed by Keolis Commuter Services that it is not responsive because it has not documented sufficient good faith efforts, a bidder/offeror may request administrative reconsideration. Bidders/offerors should make this request in writing to the following reconsideration official:

Director for EEOD & DBE Management, Keolis Commuter Services, 101 Federal St. Suite 1900, Boston, MA 02110; DBE@KCS.com

The reconsideration official will not have played any role in the original determination that the bidder/offeror did not document sufficient good faith efforts.

As part of this reconsideration, the bidder/offeror will have the opportunity to provide written documentation or argument concerning the issue of whether it met the goal or made adequate good faith efforts to do so. The bidder/offeror will have the opportunity to meet in person with our reconsideration official to discuss the issue of whether it met the goal or made adequate good faith efforts to do. We will send the bidder/offeror a written decision on reconsideration, explaining the basis for finding that the bidder did or did not meet the goal or make adequate good faith efforts to do so. The result of the reconsideration process is not administratively appealable to MassDOT or the U.S. DOT.

Good Faith Efforts when a DBE is replaced on a contract (26.53(f))

Keolis Commuter Services will require a contractor to make good faith efforts to replace a DBE that is terminated or has otherwise failed to complete its work on a contract with another certified DBE, to the extent needed to meet the contract goal. We will require the prime contractor to notify the DBE Liaison Officer immediately of the DBE's inability or unwillingness to perform and provide reasonable documentation.

In this situation, we will require the prime contractor to obtain our prior approval of the substitute DBE and to provide copies of new or amended subcontracts, or documentation of good faith efforts.

If the contractor fails or refuses to comply in the time specified, our contracting office will issue an order stopping all or part of payment/work until satisfactory action has been taken. If the contractor still fails to comply, the contracting officer may issue a termination for default proceeding.

Sample Bid Specification:

The requirements of 49 CFR Part 26, Regulations of the U.S. Department of Transportation, apply to this contract. It is the policy of Keolis Commuter Services to practice nondiscrimination based on race, color, sex or national origin in the award or performance of this contract. All firms qualifying under this solicitation are encouraged to submit bids/proposals. Award of this contract will be conditioned upon satisfying the requirements of this bid specification. These requirements apply to all bidders/offerors,

including those who qualify as a DBE. A DBE contract participation goal of 15% has been established for this contract. The bidder/offeror shall make good faith efforts, as defined in **Appendix A, 49 CFR Part 26 (Attachment 1),** to meet the contract goal for DBE participation in the performance of this contract.

The bidder/offeror will be required to submit the following information: (1) the names and addresses of DBE firms that will participate in the contract; (2) a description of the work that each DBE firm will perform; (3) the dollar amount of the participation of each DBE firm participating; (4) written documentation of the bidder/offeror's commitment to use a DBE subcontractor whose participation it submits to meet the contract goal; (5) written confirmation from the DBE that it is participating in the contract as provided in the commitment made under (4); and (5) if the contract goal is not met, evidence of good faith efforts.

Section 26.55 Counting DBE Participation

We will count DBE participation toward overall and contract goals as provided in 49 CFR 26.55.

SUBPART D - CERTIFICATION STANDARDS

Section 26.61 - 26.73 Certification Process

Keolis Commuter Services will determine the eligibility of firms to participate as DBEs in MassDOT/ U.S. DOT-assisted contracts based on the determinations of the Mass. Supplier Diversity Office, which applies the certification standards of Subpart D of Part 26. To be certified as a DBE, a firm must meet all certification eligibility standards. We will make our certification decisions based on the facts as a whole.

For information about the certification process or to apply for certification, firms should contact:

John B. Fitzpatrick, Mass. Operational Services Division, Supplier Diversity Office, One Ashburton Place, 13th Fl. Boston, MA 02108. Tel.: 617-502-8851; E-mail: John.B.Fitzpatrick@state.ma.us, or

Director for EEOD & DBE Management, Keolis Commuter Services, 101 Federal St., Suite 1900, Boston, MA 02110--Tel.: (617) 312-1202; E-mail: DBE@KCS.com

SUBPART E - CERTIFICATION PROCEDURES

Section 26.81 Unified Certification Programs

Keolis Commuter Services is the member of a Massachusetts Unified Certification Program (UCP) administered by the UCP Development Committee, the MBTA and the Supplier Diversity Office. It is the goal of Keolis Commuter Services, through the Massachusetts Unified Certification Program and its other DBE program components, to ensure that DBE firms have an equal opportunity to receive and participate in MassDOT and U.S. DOT- assisted contracts. It is the goal of the Massachusetts Unified Certification Program to:

a. Ensure nondiscrimination in the award and administration of MassDOT/U.S. DOT-assisted contracts.
b. Ensure a level playing field on which DBE firms can compete fairly for MassDOT/U.S. DOT-assisted contracts.
c. Ensure that the DBE program is narrowly tailored in accordance with applicable law.
d. Ensure that only firms that fully meet 49 CPR Part 26 eligibility standards are permitted to

participate as DBE firms.

e. Assist the development of firms that can compete successfully in the marketplace outside the DBE program.

f. Develop a single efficient and comprehensive "one stop shop" certification program for firms seeking to compete for DOT-assisted contracts.

g. Ensure that all firms, from prime contractors to subcontractors, including suppliers and vendors, understand and respect their obligations relative to all aspects of the DBE program, and that deviations from the requirements of the regulation may be subject to applicable state and federal enforcement sanctions.

Keolis Commuter Services will review whether DBEs currently certified in either the 8(a) BD, SDB or DBE programs may be eligible for reciprocal consideration for the other program(s) pursuant to the U.S. DOT Reciprocal Implementation procedure and if it satisfies the additional requirements for that specific program.

Section 26.83 Procedures for Certification Decisions

Re-certifications 26.83(a) & (c)

We will review the eligibility of DBEs to make sure that they meet the standards of Subpart E of Part 26. We will complete this review no later than three years from the most recent certification date of each firm. Our schedule for this review process will be: Eligibility review of our most active firms by August 31, 2016, and our next most active firms by August 31, 2017.

For firms that we have certified or reviewed and found eligible under Part 26, we will again review their eligibility no more often then every three years. These reviews will include the following components:

1. a certification review, and,
2. an on-site review;

to assess whether there has been any change in circumstances affecting the DBE's ability to meet size, disadvantaged status, ownership or control requirements or any material change in the information provided in the DBE's application form.

"No Change" Affidavits and Notices of Change (26.83(j))

We require all DBEs to inform us, in a written affidavit, of any change in their circumstances affecting their ability to meet size, disadvantaged status, ownership or control criteria of 49 CFR Part 26 or of any material changes in the information provided in their application for certification.

We also require all owners of all certified DBEs to submit, on the anniversary date of their certification, a "no change" affidavit meeting the requirements of 26.83(j). The text of this affidavit is the following:

I swear (or affirm) that there have been no changes in the circumstances of [name of DBE firm] affecting its ability to meet the size, disadvantaged status, ownership, or control requirements of 49 CFR Part 26. There have been no material changes in the information provided with [name of DBE]'s application for certification, except for any changes about which you have provided written notice to Keolis Commuter Services under 26.83(j). [Name of firm] meets Small Business Administration (SBA) criteria for being a small business concern and its average annual gross receipts (as defined by SBA rules) over the firm's previous three fiscal years do not exceed $22,410,000.

We require DBEs to submit with this affidavit documentation of the firm's size and gross receipts.

We will notify all currently certified DBE firms of these obligations annually in writing. This notification will inform DBEs that to submit the "no change" affidavit, their owners must swear or affirm that they meet all regulatory requirements of Part 26, including personal net worth. Likewise, if a firm's owner knows or should know that he or she, or the firm, fails to meet a Part 26 eligibility requirement (e.g., personal net worth), the obligation to submit a notice of change applies.

Section 26.86 Denials of Initial Requests for Certification

If we deny a firm's application or decertify it, it may not reapply until 12 months have passed from our action.

Section 26.87 Removal of a DBE's Eligibility

In the event we propose to remove a DBE's certification, we will follow procedures consistent with 26.87. To ensure separation of functions in a decertification, we have determined that Adjudication Board of the Mass. Supplier Diversity Office (Operational Services Division) will serve as the decision maker in decertification proceedings. An administrative "firewall" has been established to ensure that the same office will not have participated in any way in the decertification proceeding against the firm (including in the decision to initiate such a proceeding).

Section 26.89 Certification Appeals

Any firm or complainant may appeal our decision in a certification matter to U.S. DOT. Such appeals may be sent to: U.S. Department of Transportation • Departmental Office of Civil Rights • External Civil Rights Programs Division (S-33) • 1200 New Jersey Ave., S.E. • Washington, DC 20590 Phone: (202) 366-4754 • TTY: (202) 366-9696 • Fax: (202) 366-5575

We will promptly implement any DOT certification appeal decisions affecting the eligibility of DBEs for our DOT-assisted contracting (e.g., certify a firm if DOT has determined that our denial of its application was erroneous).

Resorting to this system is not a remedy a firm needs exhaust before making a certification appeal to U.S. DOT under Section 26.89.

SUBPART F - COMPLIANCE AND ENFORCEMENT

Section 26.109 Information, Confidentiality, Cooperation

We will safeguard from disclosure to third parties information that may reasonably be regarded as confidential business information, consistent with Federal, state and local law.

Notwithstanding any contrary provisions of state or local law, we will not release personal financial information submitted in response to the personal net worth requirement to a third party (other than authorized agencies) without the written consent of the submitter.

Monitoring Payments to DBEs

We will require prime contractors to maintain records and documents of payments to DBEs for three years following the performance of the contract. These records will be made available for inspection upon request by any authorized representative of Keolis Commuter Services, U.S. DOT, FTA and the MBTA. This reporting requirement also extends to any certified DBE subcontractor.

We will perform interim audits of contract payments to DBEs. The audit will review payments to DBE subcontractors to ensure that the actual amount paid to DBE subcontractors equals or exceeds the dollar amounts stated in the schedule of DBE participation.

10.C. DBE LETTERS OF INTENT

The DBE Letters of Intent are included in Binder 2 — Forms and Appendices Related to Disadvantaged Business Enterprises Plan.

10.D. CERTIFICATION LETTERS

The DBE Certification Letters are included in Binder 2 — Forms and Appendices Related to Disadvantaged Business Enterprises Plan.

10.E. ORIGINAL DBE AFFIDAVITS REGARDING CHANGE IN DBE STATUS

The Original DBE Affidavits Regarding Change in DBE Status are included in Binder 2 — Forms and Appendices Related to Disadvantaged Business Enterprises Plan.

10.F. DOCUMENTATION OF GOOD FAITH EFFORTS

Throughout the bidding phase we have employed good faith efforts to encourage DBEs to participate in the contract. Our initiatives have included the following:

1. Outreach events

Working in partnership with Diversity Development, LLC, we held a total of two outreach sessions to introduce Keolis Commuter Services to potential subcontractors and explain the scope of the Contract services which is available for DBE participation. Sessions were held in Lowell, MA on April 24th, 2013, and in Central Boston on May 15th, 2013.

Keolis
Commuter Services

Join us at an informational session regarding contracting, vending and supplier opportunities for certified Disadvantaged Business Enterprises (DBE) on the MBTA Commuter Rail Procurement Project Owner: Massachusetts Bay Transportation Authority RFP Number 159-12

Keolis Commuter Services is an internationally established public transportation firm seeking certified **Disadvantaged Business Enterprises (DBE)** companies to be a considered in their procurement proposal with the **Massachusetts Bay Transportation Authority (MBTA). Keolis** is looking for a wide range of DBEs.

Interested parties are invited to an informational seminar:

Thursday, May 23rd at 6:30 pm.
101 Federal Street 4th floor
Boston, MA 02110

Learn about available opportunities. Meet Keolis management. Discuss your business services with Keolis representatives. Supplier Diversity Office representatives will be in attendance.

If you'd like to attend this session, please provide a copy of your current DBE certification and a letter of interest with detailed information regarding your products and services to Kathe Gregory-Diversity Development **before** May 23rd (kgregory@diversitydevelopment.com). (NOTE: Put your **company name in the subject line** of your e-mail!). For more information, Click here, register your company on the **Keolis** website and see a list of scopes of work - or contact us at (617) 319-1202.

We look forward to hearing from you.

Figure 10-3: Outreach Flyer

The agenda for each meeting included an introduction by Keolis management, giving details of the company, the MBTA Service and the related subcontracting opportunities. These events were a great success, with more than 30 DBEs attending. The rosters of attendees are included in the appendix to this section.

2. Written notification to DBEs encouraging participation in the contract

We have provided extensive written notification to DBEs, including contacting DBEs, as well as MBEs and WBEs that might be interested in working with us on the MBTA Service procurement, by e-mail. We used the ODCR/ SDO list and contacted more than 50 potential subcontractors who are not yet certified DBEs, as well as Diversity Development's list of local MBEs and WBEs, which includes around140 companies with various areas of expertise. The list of companies we contacted, as well as copies of our email exchanges, are available upon request.

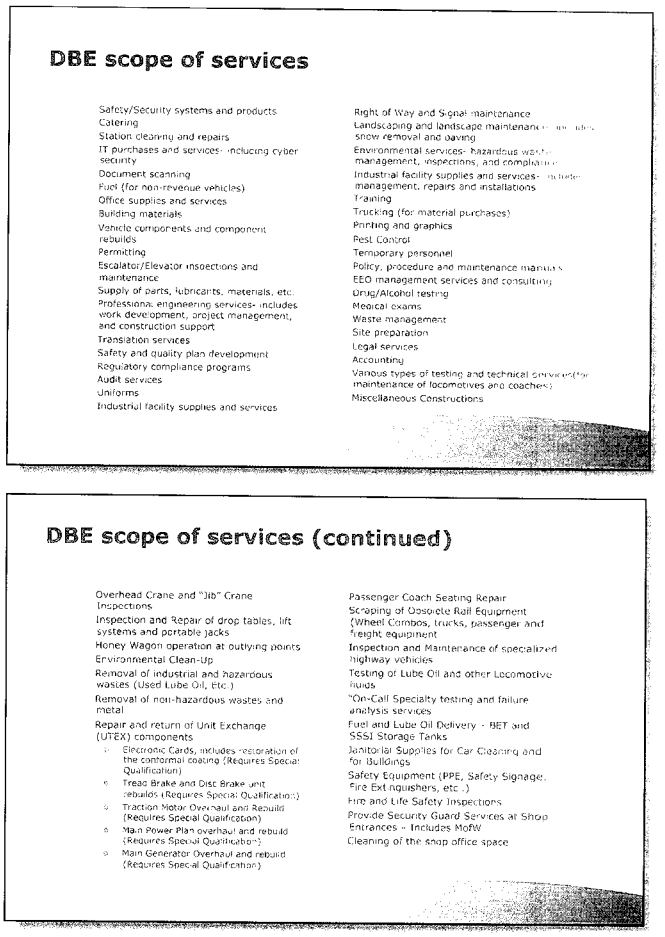
3. Soliciting the interest of all certified DBEs

Throughout the bidding period, we worked with Diversity Development, which is itself a DBE, to solicit the interest of all local certified DBEs. Our actions in this field included the following:

- Reviewing the ODCR/SDO list, the DCAM (Department of Capital Asset Management) list and the Diversity Development directory and other sources for potential DBE contractors.
- Compiling information on the companies and soliciting DBEs, as well as MBEs and WBEs that might be interested in working with us on the MBTA Service procurement, by e-mail and phone calls.
- Arranging community DBE information sessions and disseminating advertisements to the DBE community and several organizations of MBEs, WBEs and DBEs, such as the Massachusetts Minority Contractors Association.
- Collaborating with the ODCR/SDO to arrange for outreach to DBEs, distribution of information session notices and distribution of scopes of work available.
- Following up on those that responded by e-mail and telephone, conducting telephone interviews with those DBEs that indicated they were interested.

4. Selecting portions of the contract to be performed by DBEs

We defined the following scope of work for DBEs, which we presented in our outreach events, published on our web-based procurement gateway and used as a basis for negotiating subcontracts:


DBE scope of services
Safety/Security systems and products
Catering
Station cleaning and repairs
IT purchases and services - including cyber security
Document scanning
Fuel (for non-revenue vehicles)
Office supplies and services
Building materials
Vehicle components and component rebuilds
Permitting
Escalator/Elevator inspections and maintenance
Supply of parts, lubricants, materials, etc.
Professional engineering services - includes work development, project management, and construction support
Translation services
Safety and quality plan development
Regulatory compliance programs
Audit services
Uniforms
Industrial facility supplies and services
Right of Way and Signal maintenance
Landscaping and landscape maintenance - including snow removal and paving
Environmental services - hazardous waste management, inspections, and compliance
Industrial facility supplies and services - including management, repairs and installations
Training
Trucking (for material purchases)
Printing and graphics
Pest Control
Temporary personnel
Policy, procedure and maintenance manuals
EEO management services and consulting
Drug/Alcohol testing
Medical exams
Waste management
Site preparation
Legal services
Accounting
Various types of testing and technical services (for maintenance of locomotives and coaches)
Miscellaneous Constructions

DBE scope of services (continued)
Overhead Crane and "Jib" Crane Inspections
Inspection and Repair of drop tables, lift systems and portable jacks
Honey Wagon operation at outlying points
Environmental Clean-Up
Removal of industrial and hazardous wastes (Used Lube Oil, Etc.)
Removal of non-hazardous wastes and metal
Repair and return of Unit Exchange (UTEX) components
Electronic Cards, includes restoration of the conformal coating (Requires Special Qualification)
Tread Brake and Disc Brake unit rebuilds (Requires Special Qualification)
Traction Motor Overhaul and Rebuild (Requires Special Qualification)
Main Power Plan overhaul and rebuild (Requires Special Qualification)
Main Generator Overhaul and rebuild (Requires Special Qualification)
Passenger Coach Seating Repair
Scraping of Obsolete Rail Equipment (Wheel Combos, trucks, passenger and freight equipment
Inspection and Maintenance of specialized highway vehicles
Testing of Lube Oil and other Locomotive fluids
"On-Call Specialty testing and failure analysis services
Fuel and Lube Oil Delivery - BET and SSSI Storage Tanks
Janitorial Supplies for Car Cleaning and for Buildings
Safety Equipment (PPE, Safety Signage, Fire Extinguishers, etc.)
Fire and Life Safety Inspections
Provide Security Guard Services at Shop Entrances - Includes MofW
Cleaning of the shop office space

Figure 10-5: DBE Scope of Services (continued)

5. Providing interested DBEs with adequate information about the Contract

We provided DBEs with detailed information about the MBTA Service at our outreach events, in one-to-one discussions with interested DBEs and through our website. Firms interested in finding out more information about the contract and business opportunities can contact us not only at our offices located in Boston, but also through our web-based procurement portal:

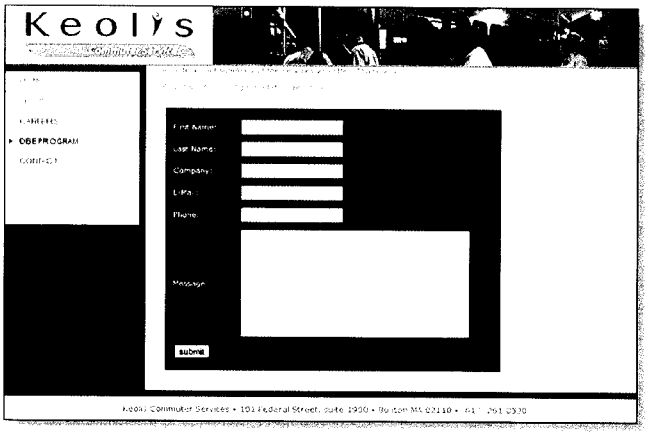


Figure 10-5: Our Web-Based Procurement Portal

6. Negotiating in good faith with interested DBEs (names, addresses and telephone numbers of DBEs that were considered; description of information provided to DBEs; evidence why additional agreements could not be reached)

Over the past few weeks and months, we have been negotiating in good faith with the following interested DBEs:

DBE	Area of work	Address	Telephone Number
RM Technologies, Inc.	Fleet Management "Non-Revenue" Vehicles	33 Franklin Street - 2nd floor, Lawrence, MA 01840	978-794-0006
CDW Consultants, Inc. (Civil & Environmental Engineers)	Environmental Management	40 Speen Street, Suite 301, Framingham, MA 01701	508-875-2657
Ferreira Towing Inc.	Fleet Maintenance	293 Littleton Road, Route 110, Chelmsford, MA 01824	978-454-7914
A.J. Cleaning Co., Inc.	Station Cleaning	34 Mallon Road, Dorchester, MA 02121	617-506-0210
Keville Enterprises, Inc.	Project Management and Construction Support	475 School Street, Suite 11, Marshfield, MA 02050	781-837-3884
Transit Safety Management	Safety Plan Management and FRA Compliance Programs	One East Main Street, Georgetown, MA, 01833	978-352-4877
Daven Corp.	Engineering Services	300 Oak Street, Suite 730, Pembroke, MA 02359	781-924-5117

Figure 10-6: Interested DBEs

The information provided to DBEs in general, and in particular the companies listed above, included detailed information on the scope of required services, technical expertise on railroad operations and maintenance best practices, as well as guidelines on how to exceed the requirements of the contract for the MBTA Service.

After discussions with several DBEs, we entered into contracts with seven of these firms. These contracts have a total value of $10,103,808, which comprises 17% of subcontracted services.

7. Making efforts to assist interested DBEs in obtaining bonding, lines of credit or insurance

On behalf of KCS, Diversity Development sought specific training in the bonding process through the U.S. DOT and MassDOT, and collaborated with bonding companies, insurers, lawyers and

WBEs interested in working with us that we would not require bonding from our subcontractors.

8. Making efforts to assist interested DBEs in obtaining necessary equipment, supplies and materials

In collaboration with Diversity Development, we identified specific concerns of the DBEs and informed them of our availability to provide guidance and assistance. We offered guidance on obtaining equipment, supplies and materials to DBEs.

9. Effectively using the services of available minority/women community organizations to provide assistance in the recruitment and placement of DBEs

We have sought assistance not only from Diversity Development, itself a DBE, in the recruitment and placement of DBEs, but have also reviewed the SDO list, the DCAM (Department of Capital Asset Management) list and other sources for potential DBE contractors, such as the Massachusetts Minority Contractors Association. We also collaborated with the ODCR/SDO to arrange for outreach to DBEs, distribution of information session notices and distribution of scopes of work available, and discussed the opportunity to develop mentoring programs, etc.

10.G. BEST PRACTICES SUPPORT

The areas of our DBE Plan which are innovative, best practice, beneficial to MBTA customers and cost efficient are shown below:

Area	Initiative	Innovative	Best practice	Beneficial to customers	Cost efficient	Support
Implementation and Monitoring	Keeping a running tally of actual payments to DBE firms		•	•	•	10.A
	Ensuring work committed to DBEs is actually performed by DBEs		•	•	•	10.A
	Bringing false, fraudulent or dishonest conduct to MassDOT's attention		•		•	10.A
Management, monitoring and reporting on DBE participation	Monthly written reports		•	•	•	10.A
	Maintaining records on certification		•	•	•	10.A
Ensuring interfacing with the MBTA	Submitting monthly reports	•	•		•	10.A
	Set a schedule of meetings with the MBTA	•	•		•	10.A
Good faith efforts	Create and publish a Joint Business Guide	•	•	•	•	10.A
	Informing DBEs about subcontracting opportunities		•	•	•	10.A
	Working with a certified DBE firm to manage our DBE Plan and outreach events	•	•	•	•	10.F
	Provide information on prime subcontractors	•	•	•	•	26.25
	Inviting contact via our web-based procurement portal	•	•	•	•	26.25
	Attending and organizing outreach events		•	•		10.F
	Passing DBE participation goals down to our subcontractors		•	•	•	26.11
	Unbundling larger projects	•	•	•		II
	Allowing joint ventures or consortia to bid	•	•	•	•	26.25
	Making our training offer available to DBEs	•	•	•		26.25
	Creating and maintaining a bidders list	•	•	•	•	26.25
Providing technical assistance to DBEs	Making our training offer available to DBEs	•	•	•	•	26.25
	Facilitating the transition from MBE/WBE status to DBE	•	•	•	•	26.53
	Encouraging the use of DBE financial institutions	•	•		•	26.27
	Assessing the needs of DBEs annually to target technical assistance	•	•	•	•	10.F

Figure 10-7: Best Practices Report

SECTION 11

Equal Employment Opportunity and Other Civil Rights Programs Requirements Evaluation Factor Information

SECTION 11 — EQUAL EMPLOYMENT OPPORTUNITY (EEO) AND OTHER CIVIL RIGHTS PROGRAMS REQUIREMENTS EVALUATION FACTOR INFORMATION

Contents

11. INTRODUCTION 2
- I. Executive Summary 2
- II. The MBTA's Objectives as We Understand Them 2
- III. Our Assessment of the Current Situation 3
- IV. The Results We Will Deliver 4

11.A. PROPOSER EQUITY MEMBER AFFIRMATIVE ACTION PLANS, CIVIL RIGHTS INVESTIGATION PROCESSES AND TRAINING PROGRAMS 6

11.B. PROPOSER AAP 34

11.C. BEST PRACTICES SUPPORT 34

11. INTRODUCTION

I. Executive Summary

Equal Employment Opportunity and Diversity (EEOD) are important parts of the culture of Keolis and SNCF. As public transportation operators, we provide services to all sections of society, and we strive to grow ridership on our networks by making our trains accessible to all members of the public. In every public transportation network that we operate, we actively seek to ensure that our organization reflects the make-up of the local population. As members of the local community, our employees naturally strive to improve the service we provide, and the fact that they reflect the local population helps them — and us — to identify, understand and respond to the needs of our customers. Actively encouraging equal employment opportunity and diversity allows us to achieve our commitment of **Moving Further Together**.

In the following plan we demonstrate our firm commitment to EEOD by:

- Describing the actions and initiatives we will implement as the MBTA Service operator, which will be modeled on leading-practice EEOD initiatives and programs currently provided by Keolis and SNCF, on other rail systems
- Identifying the Director - EEO, Diversity and DBE Management (Director - EEOD) as the person responsible for securing compliance by reporting progress to our General Manager and the MBTA's Office of Diversity and Civil Rights (ODCR) on all EEOD efforts initiated and taken. Our Director - EEOD will be responsible for leading the culture of openness and inclusion which we will promote in the MBTA Service
- Detailing how we will ensure that managers and employees are aware of our approach and policy toward EEOD before joining the company, and outline our existing training programs and recruitment activities that will be adapted for and implemented on the MBTA Service
- Showing how we will cooperate fully with the MBTA and ensure equal employment opportunity to the maximum extent during the contract term
- Demonstrating that our workforce management plan is inclusive of opportunities for everybody, without regard to any protected classifications.
- Including a draft Affirmative Action Plan (AAP) for race, gender and ethnicity, veterans and individuals with disabilities, which we will implement within 120 days of the award of the contract

II. The MBTA's Objectives as We Understand Them

We understand that, as the largest public sector employer in the Boston region, the MBTA's goal is to set the standard for EEOD. We will support the MBTA in becoming the Boston area's prime example of best practice in EEOD. Our initiatives, described below, will ensure that our workforce management provides opportunities for the employment of women, minorities, veterans and disabled people.

In addition, the MBTA seeks to work with a contractor who is transparent in employment and business practices, as well as responsive to all requests for information on EEOD issues. As a contractor to the agency, we will be completely transparent in its employment and business practices and responsive to all requests for information and reporting from the MBTA. In order to ensure this, the responsibility for

reporting progress to our General Manager and the MBTA's ODCR on all EEOD efforts will lie with our Director - EEOD.

Having met with the Mass DOT's Supplier Diversity Office (SDO), who gave us an insight into their vision and goals for EEOD, we recognize that a key priority for MassDOT and the MBTA is to have access to information on diversity which goes beyond the legal reporting requirements in terms of frequency and depth of analysis. We will improve transparency above the current standard by providing comprehensive information spontaneously, in addition to responding to the minimum legal requirements. We will ensure that our Director - EEOD and the members of the Affirmative Action Committee (AAC) which we propose forming are available to meet, work with and respond to any inquiries from the MBTA, to ensure that we support the MBTA to become the area's leader in EEOD issues.

III. Our Assessment of the Current Situation

Analysis of the Boston Area's Demographics

Over the years, Metro Boston has become increasingly diverse, with minority populations increasing between 2000 and 2010 (up 6.3%), according to the Metropolitan Area Planning Council. The Latino and Asian populations grew by the greatest percentages (3% and 2%, respectively), the percentage of Blacks/African Americans increased slightly, and Whites decreased as a share of the total population as shown here:

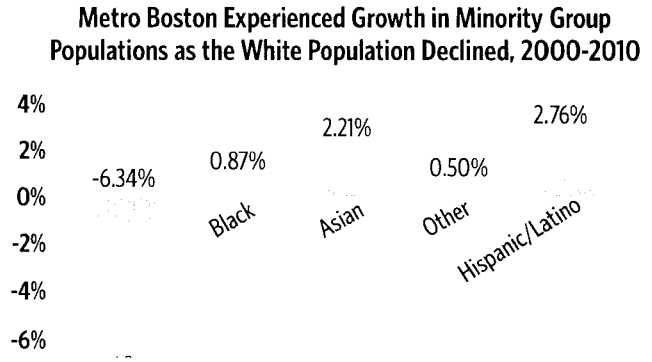


Figure 11-1: Metro Boston Experienced Growth in Minority Group Populations as the White Population Declined, 2000-2010

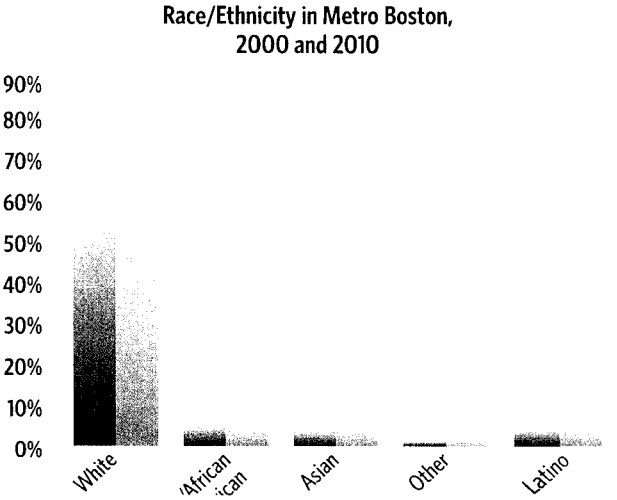


Figure 11-2: Race/Ethnicity in Metro Boston, 2000-2010

The highest concentration of racial minority group members and Latino residents live in the Inner Core, particularly Boston, and in other urbanized areas. In 2000, Boston officially became a majority-minority city, with just over half of residents (50.5%) identifying as a race/ethnicity other than non-Hispanic White. This trend continued through 2010, with Boston increasing its share of minorities to 53%, solidifying its majority-minority status. Chelsea (75%), Lynn (52%) and Randolph (61%) are also majority-minority cities in the Boston region.

The Current Operator's Record in EEOD

We have used the bidding period to assess the current situation in the MBTA Service, as far as possible. Our research has shown that the incumbent publicly commits to EEOD. Since 2008, the incumbent has also improved the EEO reporting it submits to MBTA in order to comply with the federal requirements. However, we believe that further improvements can still be made.

Similarly, the changes in the ethnic makeup of the Boston area outlined above have been roughly mirrored in the current workforce between 2003 and 2012, as shown. However, Whites and Black/African Americans are seen to be overrepresented, while people of Hispanic or Latino and Asian backgrounds appear to be underrepresented.

During Mobilization, our Director - EEOD will use all available workforce data to refine our picture of the current workforce and devise appropriate actions in our AAP to address the areas of over- and under-representation.

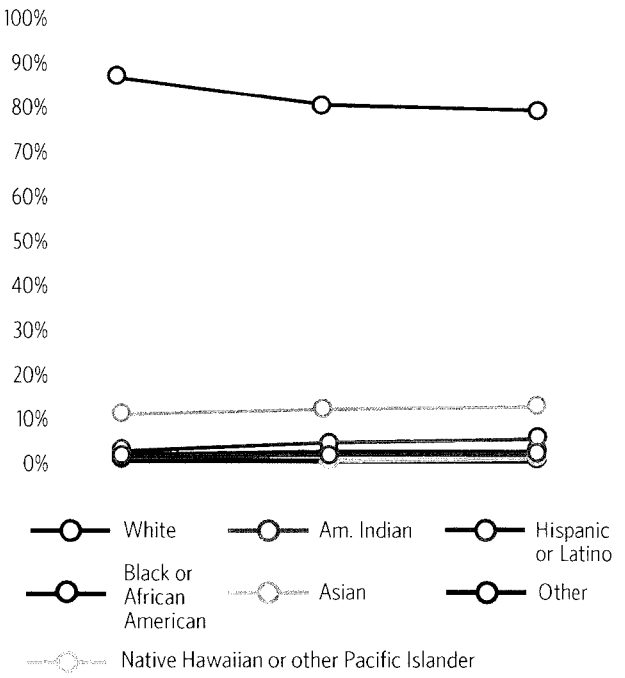


Figure 11-3: MBCR Labor Force Race Evolution 2003-2012

IV. The Results We Will Deliver

In their current operations, Keolis and SNCF comply with the laws and regulations governing equal employment opportunity and diversity in every country in which we operate. In the U.S., Keolis operations comply, at a minimum, with the following legislation:

- Federal Civil Rights Act of 1964
- Federal Immigration and Nationality Act
- Americans with Disabilities Act of 1990
- States Fair Employment Practices Act
- EEO Commission Regulations

We also protect employees and job applicants against employment discrimination involving:

- Unfair treatment because of race, color, religion, sex (including pregnancy), national origin, age, disability or genetic information
- Harassment by managers, co-workers, or others in the workplace, because of race, color, religion, sex (including pregnancy), national origin, age, disability or genetic information
- Retaliation because the employee complained about job discrimination, or assisted with a job discrimination investigation or lawsuit

In addition we consider workplace accommodation requests.

We will meet these same standards as the Operator for the MBTA Service. Beyond compliance with legal requirements, we will demonstrate our firm commitment to equality of opportunity and diversity by implementing modeled on existing Keolis and SNCF operations that have proven especially successful in recruiting and maintaining a diversified workforce. The following initiatives are representative of the results we will deliver as the operator for the MBTA Service. We are fully committed to adapting innovative, best-practice initiatives such as these in order to meet and exceed the MBTA's EEOD goals.

Ensuring all Managers and Employees Buy into our Commitment to Equality & Diversity

SNCF and Keolis operations around the world implement employee handbooks and guides for management which ensure that every employee knows what the values of the organization are and how they are expected to behave in order to fit the company's culture of diversity. Keolis Rail Services Virginia (KRSV), which operates the Virginia Railway Express (VRE), has implemented a handbook for all management and non-operating personnel, as well as a Service Instructions Manual for all operating employees. Both documents include policies on EEOD, Non-Harassment and Sexual Harassment. All of Keolis's transit operations in the U.S. have implemented an EEO Program.

Recruitment Policies and Initiatives

SNCF regularly hosts recruitment fairs specifically aimed at attracting people with disabilities, as well as recruitment events in France's economically disadvantaged areas. Over the last 6 years, 46 recruitment events have taken place, during which SNCF has introduced the company to people who may otherwise not be aware of the career opportunities that exist in the transportation sector, or who may not have the self-confidence to apply for positions. At these events, SNCF demonstrates that the only factors considered in selection decisions are the competencies, motivation and potential of the individual. Out of 12,000 candidates who attended the fairs, 2,600 have joined the company. Keolis also provides a "level playing field" in recruitment and has been able to increase its share of female employees from 28.1% in 2004 to 38.6% of employees in 2012.

Official Recognition and Implementation of EEO Standards

On October 21, 2010, Jacques Beslin, managing director of the French standards agency AFNOR, officially presented Keolis with the professional Equality certificate ("Label Egalité Professionnelle"), valid for three years. This label is particularly distinctive for Keolis, as the group is the first public transportation company to obtain this certification. The implementation of the standard has allowed Keolis to publicize its approach to equality and diversity, thereby encouraging more applications from women and minorities.

Partnerships with Trade Unions and other Training Organizations

KRSV has hosted young people benefiting from the TCU/IAM's job corps training program, to introduce them to the careers which exist in the rail industry. Managers of the company took time to show the students the operations, give them an insight into career progression in the transportation sector and prepare them for future job interviews.

Active Participation and Support of Organizations which Promote Diversity and Inclusion

In the U.S., Keolis is an active member of the Conference Of Minority Transportation Officials (COMTO). We advertise our positions on their website to encourage minority transportation professionals to develop their careers and further increase the representation of women and minorities among our staff. Keolis also supports the organization for Women in Transportation (WTS) by sponsoring events as a Platinum Member Level and encouraging our female employees to attend conferences and benefit from networking opportunities.

Promoting Career Development for Women and Disadvantaged Young People

SNCF has created an internal network for employees dedicated to furthering the careers of women in France: "SNCF au Feminin." It provides women throughout the company with opportunities to share information and experience, provide support to each other and participate in workshops designed to help the company assess the impact of its actions and decisions on women and other minorities. SNCF is also a partner of "Elles bougent," a French organization which encourages women to take up careers in engineering. The company regularly organizes informational events about engineering careers in the railroad, and has appointed 20 employees to be representatives for the program.

As a result of these initiatives 23% of all new recruits at SNCF in 2011 were women, and the percentage of women as part of the workforce has continuously grown over the past years, as shown below.

Figure 11-4: Percentage of Staff Who Are Women

In October 2012, SNCF committed to help 500 young people from minorities and disadvantaged backgrounds in 2013. The young people, who come from low-income families and have few or no qualifications, receive individualized coaching to improve basic skills such as math and reading, job-specific training and work experience to assist them in starting their careers. More than 200 young people have already been selected and will start the 18-month full-time program in the next few months.

Accommodating People with Disabilities in the Workplace

SNCF currently employs more than 6,000 people with disabilities (as part of a total workforce of 249,000) and invests close to $10 million every year, to accommodate their needs and enable them to continue working. SNCF has fixed itself the target of increasing the number of disabled people it employs by at least 500 before the end of 2015.

Helping the Unemployed Back into Work

SNCF has implemented a program to help the long-term unemployed back into work. In 2010, a total of 462 long-term unemployed worked in 37 sites on SNCF property, gaining valuable work experience in railroad infrastructure maintenance and benefiting from job specific training. The program helps individuals to rebuild self-esteem and gain an entry back into employment.

11.A. PROPOSER EQUITY MEMBER AFFIRMATIVE ACTION PLANS, CIVIL RIGHTS INVESTIGATION PROCESSES AND TRAINING PROGRAMS

Current Copy of Keolis's Affirmative Action Plan (AAP)

While Keolis's current operations in the U.S. are not directly or indirectly funded by the federal government, and we are therefore not required to comply with Affirmative Action legislation (and do not have a current AAP in place), all of our U.S. operations, as well as those of our parent, SNCF, conform to the principles embodied in Affirmative Action. We actively seek to ensure equality of opportunity in all employment-related matters, and we apply equal employment opportunity to all policies and procedures relating to recruitment and hiring, compensation, benefits, termination and all other terms and conditions of employment.

Prior Year's Analysis of Recruitment/ Outreach and Employment Practice

As explained above, Keolis's current rail operation in the U.S. is not directly or indirectly funded by the federal government, and we therefore do not formally report recruitment, outreach and employment practice at the VRE. KRSV analyzes the male / female split as well as the racial mix of its workforce and seeks to identify hidden issues of discrimination that way. Our workforce in VRE is very diverse, and we have successfully created a culture of inclusion there, which is demonstrated by the fact that we have not had any complaints of discrimination since we took over the operation and maintenance of the VRE Service. The graphs shown here are taken from KRSV's internal reporting dashboard and show the analysis we undertake on an annual basis.

Keolis's transit operations in the U.S. also analyze the make-up of their workforce and monitor their diversity at the transit division's level. As can be seen here, our transit workforce in the U.S. is

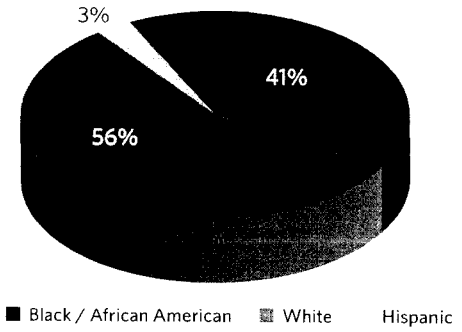


Figure 11-5: KRSV Racial Mix

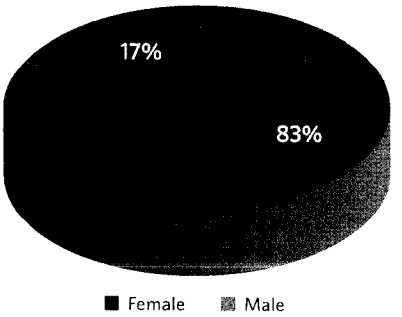


Figure 11-6: Male/Female Split

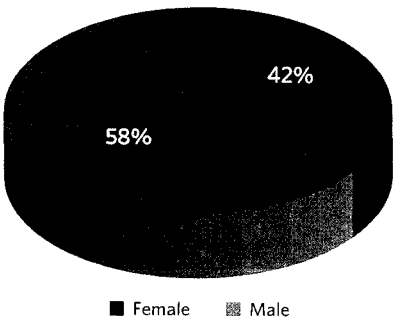


Figure 11-7: KTA Male/Female Split

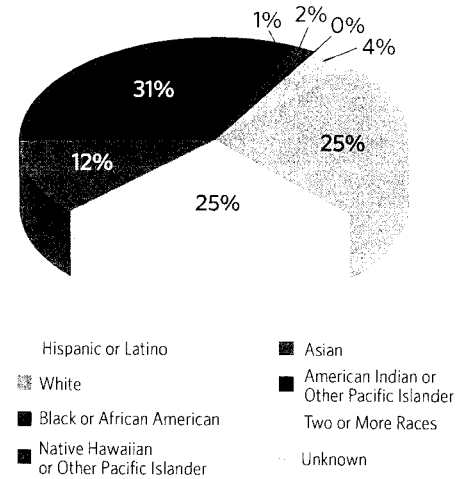


Figure 11-8: KTA Racial Mix

representative of the communities we operate in, our operations being mainly based in California and Florida where the Hispanic or Latino minorities are particularly prevalent. The proportion of female to male employees is also close to being half and half in our transit operations.

Our Commitment to EEOD

We are committed to a policy of equal opportunity without regard to race, color, religion, gender, gender identity or expression, age, sexual orientation, national origin, ancestry, disability, military status, or genetic information in employment-related decisions, including attracting, hiring, retaining and promoting a diverse workforce; and in the selection of vendors who provide services or products to the company. As evidenced by our established, best-practice programs for rail systems operated by Keolis and SNCF, we believe in respect for all individuals.

In addition to the legislation outlined above, we will comply with the MBTA's Dignity in the Workplace requirement and the US DOT's and FTA's Civil Rights and DBE requirements and applicable regulations and guidelines, including:

- 49 U.S.C. § 5332 (Nondiscrimination in Federal Public Transportation Programs)
- Title VI of the Civil Rights Act of 1964, as amended, 42 U.S.C. §§ 2000d et seq., and USDOT regulations "Nondiscrimination in Federally-Assisted Programs of the Department of Transportation - Effectuation of Title VI of the Civil Rights Act", 49 CFR Part 21, including implementing:
  - Public participation plan including public outreach efforts and involvement activities to ensure meaningful access to activities
  - Procedures for tracking and investigating Title VI complaints
  - List of public transportation-related Title VI investigations, complaints and lawsuits
  - Language assistance programs (for providing language assistance to persons with limited English proficiency)

  - Title VI notices to the public and instructions to the public regarding how to file a Title VI complaint (notifying public of their rights afforded to them by Title VI)
  - Environmental Justice analysis
- FTA Circular 4702.1B, "Title VI Requirements and Guidelines for Federal Transit Administration Recipients," effective October 1, 2012
- Non-discrimination requirements found in 49 CFR Part 27 (Nondiscrimination on the Basis of Disability)
- FTA Circular 4703.1, "Environmental Justice Policy Guidance for Federal Transit Administration Recipients", effective August 15, 2012
- 49 CFR Part 38 (ADA Requirements)
- FTA Circular 4704.1

Setting our EEOD Strategy and Assessing our Performance

As a basis for ensuring that our diversity and inclusion-related initiatives focus on the areas which require most improvement, we will perform a detailed analysis of the current workforce and employment practices, as well as the make-up of the Boston area's population, during Mobilization. This will include:

- Analyzing all human resources policies and procedures to ensure they have no unlawful adverse impact
- Monitoring and regularly reporting on all employment-related decisions
- Actively seeking to undertake outreach with the goal of employing a workforce that is representative of the Boston area, in terms of race and ethnicity, by forming partnerships with local training and recruitment agencies

We will share our findings from this initial review and analysis with the MBTA and will finalize our AAP, as well as the list of initiatives we will implement, based on this analysis.

The initiatives listed below are based on best practice at Keolis and SNCF operations around the world. As they apply to all diversity factors and have proven to be effective, we can already commit to implementing them at the MBTA Service.

Disseminating our EEOD Values and Policy

Our actions to encourage equal employment opportunity for each of the protected categories will be founded on our commitment to ensuring that everybody involved in the provision of commuter rail services for the MBTA knows and lives by the values of openness and inclusion. To set the tone and ensure that all employees are aware of our approach to equal employment opportunity, our General Manager will inform all employees, unions and subcontractors involved in the provision of commuter rail service for the MBTA of our approach to diversity and inclusion before commencement of the contract. In addition to this, we will ensure that our policies are clearly described in all employee orientation sessions, as well as in all handbooks and service instructions.

Accommodating People with Disabilities in the Workplace

We will commit to making reasonable accommodations for the known physical or mental limitations of an otherwise qualified individual with a disability who is an applicant or an employee, unless undue hardship would result. Our Human Resources managers will be trained to help individuals with such disabilities to identify what reasonable accommodation could assist the employee in performing his or her job. All requests will be submitted to the Director - EEOD, who will dispose of an annual budget for reasonable accommodations to the workplace.

Ensuring the Consistent Application of EEOD Policy and Reviewing the Effectiveness of Our Actions

Our Director - EEOD will monitor the application of our AAP in personnel management including recruitment, hiring, promotion, termination, supervision and training efforts, to ensure equal employment opportunity, by:

- Submitting annual reports to our Steering Committee and staff, and making reports available to the MBTA and the community

- Enforcing, refining, or recommending the reshaping of our EEO actions according to ongoing evaluation
- Reviewing the composition of our employees in all job categories in comparison with the composition of the qualified available workforce on an annual basis
- Analyzing the composition of job applicants to assess the effectiveness of efforts to recruit qualified members of protected groups from the qualified available workforce on an annual basis
- Reviewing the composition of our passengers (if available) in comparison with the workforce population, to ensure that our outreach efforts are effective and we hire the most qualified applicants

The goal of these self-analyses is to determine if our employment practices provide a level playing field. Based on the results of these analyses, we will take lawful steps to eliminate any disparate treatment or impacts.

Director - EEOD, dedicated to the MBTA Service

As described in Section 8 Management Plan, we will employ a full-time Director - EEOD, dedicated entirely to the MBTA Service. This Director will be informed of all pending decisions regarding posting, recruitment, hiring, transfer, promotion, disciplinary action (including Performance Improvement Plans), termination, layoff, and Massachusetts Commission Against Discrimination complaints or other pertinent complaints or suits of any member of a protected group, subject to confidentiality and the agreement of the person affected. They will:

- Work closely with the MBTA's ODCR on all EEO matters, and will report progress on all initiatives periodically to the General Manager and the MBTA
- Participate in recruitment processes including outreach, development of hiring criteria and promotion and transfer policies and practices
- Participate in the development, maintenance and updating of the AAP
- Promote and oversee effective retention practices and policies
- Act as liaison between Keolis Group and KCS, including acting as a sounding board on specific diversity-related issues and identifying programs and resources needed to promote our staff diversity and cultural competence
- Investigate and address complaints under Affirmative Action grievance procedures, where appropriate
- Manage the EEO budget for reasonable accommodations for individuals with disabilities to enable them to fulfill their essential job functions
- Act as a liaison to organizations that are comprised of or serve protected groups
- Conduct Affirmative Action information sessions for management and staff
- Oversee activities aimed at creating a supportive environment for qualified workers of all backgrounds, including activities aimed at improving retention of qualified members of protected groups
- Manage DBE and promote participation

The ADA Compliance Officer will report to the Director - EEOD to support the assessment and implementation of reasonable workplace accommodations.

Creating an Affirmative Action Committee (AAC)

In order to ensure that our EEOD policy is respected and applied across the organization, we will also create an AAC to advise management on EEOD issues. This Committee will be selected with staff and management participation, and will, as much as possible, include people from a variety of race/national origin backgrounds, job categories, religions, ages, sexual orientations, both genders and persons with disabilities. The Committee will be included in recruitment decisions and support the Director - EEOD in advising our management team on diversity-related issues, to help ensure equal employment opportunity.

Ensuring Employees Have Ample Opportunities to Raise EEOD Issues

To ensure that our actions meet the expectations of our employees and have the desired outcomes, we will also include EEOD-related questions in the bi-annual employee survey. This will enable us to identify and address employee concerns that may not be raised in the formal complaints procedure. Employees who prefer to raise concerns anonymously will also be able to call our Employee Assistance Helpline, which will feed information on all issues highlighted back to the Human Resources Department.

The grievance and civil rights investigation processes and procedures will be available for any person who perceives herself to be aggrieved by our actions or decisions. Such a grievance will be filed with the Director - EEOD and the General Manager and will contain a brief statement of the grievance and the relief requested. We will attempt to resolve grievances informally through discussions with parties involved, possibly assisted as needed by the AAC. Our grievance procedure or that described in the applicable collective bargaining agreements applies in formal resolution of a grievance.

Our Initiatives for Providing Opportunities for All

Our workforce management plan includes a number of innovative, best-practice and cost-effective initiatives, which will add value for MBTA's customers by ensuring that our employees know how to deal with passengers of all backgrounds. Our workforce management plan initiatives are focused around recruitment, supervision and evaluation of employees, training, promotion and transfers, and termination and resignation.

Recruitment

Our recruitment process is described in detail in Section 8 Management Plan, and has been designed to ensure that all hiring decisions are made free of any form of bias or discrimination. In addition to applying this best-practice process to all recruitment activities at the MBTA Service, we will implement the following initiatives to ensure that our recruitment activities are inclusive of opportunities without regard to race, gender or any other protected characteristics.

Diverse hiring committees make recruitment decisions — Each recruitment activity will be overseen by diverse recruitment committees, which will include a member of the AA Compliance Office Committee and/or the AA Compliance Officer. The committees will:

- Ensure that required skills and qualifications are strictly related to the relevant position
- Review each job description to ensure it accurately reflects the position, that credentials and experience required by the job description are essential job functions, and that the language and format of the job description will not discourage qualified candidates from applying on the basis of a protected classification
- Create a clearly defined and weighted set of criteria for hiring that includes all elements related to the needs of the job and that values ability to communicate and relate well with customer communities, along with other skills

Partnerships with recruiting firms and trade union organizations — In addition to applying our best-practice recruitment process, to ensure that members of each protected category experience a level playing field, we have already entered into a partnership with Bradley-Morris, a recruitment firm specializing in the placement

of veteran candidates. During procurement, we proved our commitment to veteran hiring by attending American Public Transportation Association (APTA)'s first veterans recruitment event, and we will continue to support veteran-related employment activities.

We have also formed a partnership with the Transportation Communications Union/ International Association of Machinists (TCU/ IAM) job corps center in Boston, to recruit young people from diverse backgrounds wherever possible, following the precedent KRSV has established for VRE. We have contacted Oscar Derderian in the Boston area office of the TCU/ IAM program to begin a relationship which will help young people in the Boston area gain experience and begin their careers at the MBTA Service.

In addition, we have met with representatives of SMART, the new organization formed from the United Transportation Union (UTU) and the Sheet Metal Workers' International Association (SMWIA), to outline an agreement for training the workforce in Boston. This will ensure that people from all walks of life not only gain employment, but are able to further their career at the MBTA Service.

Close monitoring of recruitment activities — We will ensure that all stages of the recruitment process are monitored by the AA Compliance Officer and/or the AAC. This will allow us to ensure that our recruitment decisions are free of bias and discrimination, and increase the diversity of our employees. As a result, we will be able to better respond to the needs of the passengers, as our employees are representative of the population they serve and are able to relate to staff and passengers of all backgrounds.

Supervision and Evaluation

Performance management process to promote career advancement for women and minorities — To ensure that supervision and evaluation of employees is free of all bias, we will introduce Keolis's best-practice processes and procedures, such as the best-practice performance management cycle, described in Section 8 Management Plan. This will ensure that employees' performance and potential are evaluated by a review committee, ensuring that ratings are merit-based, without regard to protected status. It will also allow us to actively encourage career advancement of high-potential employees, by identifying, flagging and targeting them for development actions. Such development actions could include providing employees with additional training and stretch assignments to accelerate their career development.

In addition to this, we will ensure that:

- Employees are supervised and evaluated based on a full range of skills, including interpersonal skills and ability to relate to staff and passengers of all backgrounds
- Information is provided to all employees about paths to promotion
- Supervisors and supervisees work together to distinguish between issues of competence and issues of work style differences in order to achieve non-discriminatory supervision and evaluation
- Supervisors' training includes instruction on diversity issues and their impact on supervision and evaluation

Training — Before being finalized, our Training Plan will be evaluated by the Director - EEOD, to ensure that no discrimination is built into our design and delivery of training opportunities. Overall, our training activities will be guided by the following principles:

- Training will be considered as a means of helping us to attract and retain staff, regardless of their background or status
- Orientation and technical training will be provided for new employees as appropriate
- We will use ongoing training to educate all staff on diversity issues in cooperation with the AA Compliance Officer and the AAC

Promotions and Transfers

Our overall commitment to EEOD applies to all promotions and transfers, and we will monitor these personnel processes on a yearly basis, to ensure all decisions are supported by legitimate, non-discriminatory, business-related reasons

and are administered without regard to protected status. In addition to monitoring promotions and transfers, we will actively encourage the career advancement of all our employees with the following initiatives.

Creating internal networking programs for women and minorities — We will create internal networks for female and minority employees, which follow the best-practice example of SNCF through "SNCF au feminin," as described previously. These internal networks are open to all employees and provide opportunities to mentor other employees from the same background, share information and experience, provide support and help the company assess the impact of its actions and decisions on equality of opportunity. In addition, as part of the larger Keolis-SNCF family, employees of the MBTA Service will have access to the existing networks within the Keolis-SNCF group. These networks have proven to encourage employees from all backgrounds to advance their careers and will allow us to increase the number of employees from diverse backgrounds in leadership positions.

Creating coaching and mentoring opportunities for women and minorities — The internal networks described above will also create the opportunity for coaching and buddying programs to give all employees the opportunity to be supported by each other in the professional environment. By enabling employees from diverse backgrounds to learn from each other's experience, we will be able to gradually change the face of the MBTA Service to be more representative of the Boston area.

Termination and Resignation

Our AAP will apply to layoff decisions and will ensure that any decisions for termination are based on legitimate, non-discriminatory, business-related reasons. For example we will conduct exit interviews with all departing employees to determine whether diversity issues contributed to the decision.

Civil Rights Investigation Processes and Procedures

As with EEO, Keolis follows local rules and regulations on dealing with employee complaints, including civil rights complaints. Keolis has adopted an open door policy in order to further demonstrate the value we place on our staff. This means that every manager's door is open to every employee. The purpose of the open door policy is to encourage open communication, feedback and discussion about any matter of importance to our employees. The company's open door policy means that employees are free to talk with any manager at any time.

Each member of management is responsible for creating an atmosphere free of discrimination. Further, employees are responsible for respecting the rights of their co-workers, clients, customers and vendors. A manager or supervisor has the responsibility to address concerns and help our staff members understand workplace practices, processes and business decisions. If an employee does not feel comfortable discussing his or her issue with his or her immediate supervisor, the open door policy allows an employee to discuss an issue or concern with the next level of management and/or Human Resources directly. All managers and supervisors listen to any workplace concerns and help with resolution or clarification. In addition to this, the Employee Assistance Program is available for employees to call at any time. Any EEOD-related issues raised will be kept anonymous, but brought to the attention of the Director - EEOD, who will investigate and resolve the issue.

If employees' issues cannot be resolved informally, employees are encouraged to follow formal processes to raise their concerns. At VRE, KRSV's employees covered by collective bargaining agreements (CBAs) follow the rules concerning raising grievances, outlined in their CBAs. All other employees are covered by the complaints procedure detailed in the Employee Handbook. To date, KRSV has not received any formal grievances or complaints.

We will follow this same approach to managing employee complaints, including civil rights issues, and will ensure that all complaints are investigated immediately. During Mobilization, we will assess the approach to civil rights investigations followed by the current operator and will make all changes necessary to ensure it is aligned with our own philosophy.

We will ensure that the investigation processes and procedures we implement for the MBTA Service follow current best practice. In order to do so, the Keolis America Human Resources Manager, who will work with our Director — Human Resources and Training to develop the Training Program Plan during Mobilization, will follow the Massachusetts Commission Against Discrimination (MCAD) "Train the Trainer" courses on "Preventing and Addressing Discrimination in the Workplace" and "Conducting Internal Discrimination Complaint Investigations." These courses are run between January and June every year, and we have already signed up for the January 2014 courses. This will enable us to properly assess and improve the investigation process currently in place.

Description of Training Programs in EEO/AAP/ Civil Rights

In order to ensure that all employees know and follow the corporate approach to EEO, and contribute to making equal employment opportunity a reality at Keolis, we provide EEO training to all our staff. For example, KRSV provides the following training to all newly recruited employees:

- Equal Employment Opportunity and Diversity
- Drug-Free Workplace Policy
- Sexual Harassment

As described in detail in the Section 12 Mobilization Plan, we will use Mobilization to analyze the entire training offer put in place by the current operator and prepare our own Training Program Plan for submission to the MBTA. Our Training Program Plan will cover training for all new employees, technical training for each class of employees and management training.

Training on equal employment opportunity and harassment will be part of the training for all new employees. As a minimum, this training course will cover the topics shown below:

- Objectives of EEO Laws
- Prohibited Types of Discrimination (Bases)
- Our approach to EEO
- What Constitutes an EEO Complaint
- Avenues of Redress
- Reasonable Accommodation
- Preventing and Dealing with Workplace Harassment

Our management training offer will include training on AAP and Civil Rights Investigation Process. In addition to the information contained in the general EEO training, it will give managers the tools to manage their staff within the law and make fair employment decisions. This more in-depth training course will cover the following areas:

- The forms of discrimination
  - Disparate treatment
  - Adverse impact
  - Harassment/hostile environment
  - Retaliation
- Supervisors' responsibility: It is the responsibility of every manager and supervisor to ensure a workplace free of discrimination and harassment.
- Preventing harassment
  - Preventing discrimination, for example, at interview
  - Best-practice interviewing techniques, including preparing a list of interview questions for the position, developing rating criteria and key attributes required for the position, and recording notes on applicants' answers
  - Interviewing questions do's and don'ts
  - Sample interview questions

2013 DRAFT AFFIRMATIVE ACTION PROGRAM FOR KEOLIS COMMUTER SERVICES LLC

Program Completed by: _____ **[EEO COORDINATOR]**

EEO Coordinator

Address: **[ADDRESS]**

Program Approved by: _____

[PRESIDENT]

residentThis Affirmative Action Program is effective from [DATE] to [DATE].

KEOLIS COMMUTER SERVICES LLC.
AFFIRMATIVE ACTION PROGRAM
STATEMENT OF PRIVILEGE

Copies of this Affirmative Action Program and all related appendices, documents and support data are made available on loan to the United States Government upon the request of said Government on the condition that the Government hold them totally confidential and not release copies to any person whatsoever. This Affirmative Action Program and its appendices and other supporting documents contain confidential information which may reveal, directly or indirectly, the Company's plans for business or geographical expansion or contraction. The Company considers this Affirmative Action Program, all portions thereof and all supporting material to be its private and confidential property and to be on loan to the Government only under specified conditions, including non-reproduction and non-distribution and to be exempt from disclosure under the Freedom of Information Act upon the grounds, inter alia, that such material constitutes: (1) personnel files, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy and are exempt from disclosure under 5 U.S.C. §552(b)(6); (2) confidential, commercial or financial information which is exempt from disclosure under 5 U.S.C. §522(b)(4); (3) investigatory records compiled for law enforcement purposes, the production of which would constitute an unwarranted invasion of personal privacy and are exempt from disclosure under 5 U.S.C. §552(b)(7); and (4) matters specifically exempted from disclosure by statute and are exempt from disclosure under 5 U.S.C. §522(b)(3).

The Company will submit further detailed documentation supporting this claim of privilege if necessary.

KEOLIS COMMUTER SERVICES LLC.
AFFIRMATIVE ACTION PROGRAM
NON-ADMISSION STATEMENT

It is understood that this Affirmative Action Program, or any part thereof, does not constitute an admission by the Company of any violation of Executive Order 11246, as amended the Vocational Rehabilitation Act of 1973, the Vietnam Era Veterans' Readjustment Assistance Act of 1974, Title VII of the Civil Rights Act of 1964 or of any federal, state or local law and has been developed in order to reaffirm the Company's policy of providing equal employment opportunity for all persons without regard to race, religion, color, national origin, citizenship, sex, veteran's status, age or disability. Goals have been established, where appropriate, to endeavor to meet affirmative action obligations.

This program is not intended to and will not be used to discriminate against any applicant or employee because of race, religion, color, national origin, citizenship, sex, veteran's status, age or disability.

SEX DISCRIMINATION POLICY

In accordance with our policy of equal employment opportunity, we have adopted the following policy prohibiting sex discrimination and sexual harassment in the workplace. In addition to continued adherence to the goals enunciated in our Affirmative Action and Equal Employment Opportunity Policy, we will also continue to do the following as applicable:

I. RECRUITMENT AND ADVERTISEMENT

A. Recruit men and women for all positions, except where sex is a bona fide occupational qualification, without regard to the applicant's or candidate's sex.

B. Ensure that "help-wanted" advertising does not express a sex preference for any job, unless sex is a bona fide occupational qualification for that job.

C. Refrain from placing advertisements in newspapers or other media which are labeled "Males" or "Females," or otherwise segregated by sex, unless sex is a bona fide occupational qualification.

II. JOB POLICIES AND PRACTICES

A. Review personnel policies to avoid discrimination on the basis of sex.

B. Consider employees and applicants of both sexes for assignment, transfer or promotion to all positions for which they are qualified, except where sex is a bona fide occupational qualification.

C. Administer employment opportunities, wages, hours, conditions of employment, pensions, recreation programs and employee benefits without regard to sex.

D. Consider married and unmarried men and women equally in all personnel actions, including the administration of wages and benefits, without regard to the number of dependents which an individual may support or maintain. Retirement age and retirement benefits will be equal for both sexes.

E. Provide appropriate facilities, e.g., rest rooms and locker areas, for employees and applicants of both sexes.

F. Refrain from reliance upon state laws which conflict with Title VII of the Civil Rights Act of 1964, as amended, or Executive Order 11246 and are superseded thereby.

G. Provide leaves of absence to employees, without regard to an employee's sex. No employee will be discriminated against because of pregnancy. Following childbirth, and upon signifying her intent to return within a reasonable time, the Company will reinstate such employee to her original job or to a position of like status and pay, without loss of service credits.

III. SENIORITY

Consider employees' seniority and administer any seniority system without regard to employees' sex.

IV. DISCRIMINATORY WAGES

Determine wage schedules without regard to sex. There will be equal pay for equal work.

V. SEXUAL HARASSMENT

The EEO Coordinator shall notify all supervisors and managers that they are prohibited from engaging in, tolerating or otherwise promoting unwelcome sexual advances, requests for sexual favors and other verbal or physical conduct of a sexual nature by employees or supervisors, when (1) submission to such conduct is made either explicitly or implicitly a term or condition of an individual's employment, (2) submission to or rejection of such conduct by an individual is used as the basis for employment decisions affecting such individual or (3) such conduct has the purpose or effect of substantially interfering with an individual's work performance or creating an intimidating, hostile or offensive working environment.

The EEO Coordinator shall take reasonable steps to prevent sexual harassment from occurring, including, but not limited to, expressing strong disapproval of such conduct, developing appropriate sanctions, informing employees of their right to raise the issue of sexual harassment under Title VII and the procedure therefore and, generally, developing programs to sensitize managers, supervisors and employees to the nature of this problem.

VI. DEFINITION

The terms "because of sex," on "the basis of sex" and "regardless of sex" include, but are not limited to, because of or on the basis of pregnancy, childbirth or related medical conditions. Women affected by pregnancy, childbirth or related medical or physical conditions shall be treated the same for all employment-related purposes, including the receipt of benefits under fringe benefit programs, as other persons who are not so affected but are similarly able or unable to work.

VII. LEAVE OF ABSENCE DUE TO MATERNITY

Leaves of absence due to maternity are treated under our Family and Medical Leave Act Policy.

RELIGIOUS AND NATIONAL ORIGIN DISCRIMINATION POLICY

In accordance with its policy of equal employment opportunity, the Company has adopted the following policy prohibiting discrimination on the basis of religion and national origin, and supporting affirmative action to ensure that all individuals are employed and treated during employment without regard to their religion or national origin.

I. SCOPE OF THIS POLICY

This policy applies to all terms and conditions of employment, including, but not limited to, hiring, upgrading, demotion, transfer, recruitment, recruitment advertising, layoff or recall from layoff, wage and benefit administration and selection for training.

II. OUTREACH AND POSITIVE RECRUITMENT

To determine whether members of all religious and ethnic groups are receiving fair consideration for job opportunities, the Company will consider reviewing its employment practices. Special attention will be directed toward executive and middle-management levels, where employment problems relating to religion and national origin are statistically most likely to occur. Based upon the findings of such reviews, we will undertake appropriate outreach and positive recruitment activities, such as those listed below in order to remedy any existing deficiencies. The scope of our efforts, of course, will depend upon all the circumstances including the nature and extent of any deficiencies and our size and resources. The Company will consider the following actions:

A. Explaining to all employees the Company's obligation to provide equal employment opportunity, without regard to religion or national origin, in such a manner as to foster understanding, acceptance and support among other executives, management staff, supervisors and all other employees and encouraging such persons to take all actions necessary to aid the Company in

meeting our obligation;

B. Developing reasonable monitoring procedures to insure that our obligation to provide equal employment opportunity, without regard to religion or national origin, is being fully implemented;

C. Informing periodically all employees of our commitment to equal employment opportunity for all persons, without regard to religion or national origin and

D. Enlisting the assistance and support of recruitment sources (including employment agencies, college placement directors and business associates) in referring applicants without regard to religion or national origin.

III. ACCOMMODATIONS TO RELIGIOUS OBSERVANCE AND PRACTICE

The Company will endeavor to make a reasonable accommodation to the religious observances and practices of any employee or prospective employee, unless such an accommodation will impose an undue hardship on the conduct of our business. Generally, we will try to make reasonable accommodations to the religious observances and practices of any employee or prospective employee who regularly observes Friday evening and Saturday, or some other day of the week, as the Sabbath and/or who observes certain religious holidays during the year and is conscientiously opposed to performing work or engaging in similar activity on such days, when such accommodations can be made without undue hardship on the conduct of our business. In determining the extent of the hardship imposed, we may consider: (a) business necessity; (b) financial costs and expenses and (c) resulting personnel problems.

DESIGNATION OF RESPONSIBILITY FOR IMPLEMENTATION

I. EXECUTIVE MANAGEMENT RESPONSIBILITY

As the representative of executive management, the EEO Coordinator has primary responsibility and accountability for implementing, directing and monitoring this Affirmative Action Plan. The EEO Coordinator's responsibilities may include:

A. Implementing the affirmative action programs set forth in this Plan, including the development of policy statements and related internal and external communication procedures to disseminate those policy statements.

B. Developing and supervising the presentation of our equal employment opportunity policy during the supervisory training and new employee orientation programs, which may include question-and-answer sessions for supervisors and employees answering their questions about this Affirmative Action Plan.

C. Designing and implementing an audit and reporting system that will accomplish the following:
   - Measure the effectiveness of our affirmative action programs.
   - Indicate when remedial action is needed.
   - Determine the degree to which our goals and objectives have been attained.

D. Advising management and supervisory personnel on developments in the laws and regulations governing equal employment opportunity.

E. Serving as liaison between the Company and all enforcement agencies.

F. Identifying problem areas and establishing goals and objectives to remedy underutilization in major job groups, if any underutilization exists.

G. Conferring with community organizations representing women, minorities, veterans, the disabled and older workers.

H. Auditing periodically our on-the-job training, hiring and promotion patterns to remove impediments to attainment of the Company's goals and objectives.

I. Rating supervisory employees based, in part, upon their efforts and success in furthering the goal of equal employment opportunity and informing supervisory employees of this evaluation practice.

J. Discussing periodically the Company's commitment to equal employment opportunity with managers, supervisors and employees. During these discussions, the EEO Coordinator will stress the importance of affirmative action, as well as nondiscrimination.

K. Reviewing the qualifications of all employees to insure that minorities and women are given full opportunities for transfers, promotions and training.

L. Providing access to career counseling for all employees.

M. Conducting periodic audits to ensure that the Company is in compliance with federal and state laws and regulations requiring:

1. Proper display of posters explaining the Company's obligation to engage in nondiscriminatory employment practices.
2. Integration of all facilities which we maintain for the use and benefit of our employees.
3. Maintenance of comparable facilities, including locker rooms and rest rooms, for employees of both sexes.
4. Providing full opportunity for advancement and encouraging minority and female employees to participate in educational, training, recreational and social activities sponsored by the Company.

N. Counseling supervisors and managers to take actions necessary to prevent harassment of employees placed through affirmative action efforts and to eliminate the cause of such complaints. Further, the EEO Coordinator will counsel supervisors and managers not to tolerate discriminatory treatment of any employee by another employee or supervisor and to report all complaints or incidents to him.

O. Establishing an internal complaint system that will enable employees to discuss complaints with the EEO Coordinator whenever they feel that they are being discriminated against on the basis of race, color, religion, sex, national origin, disability or veterans' status.

P. Serving as liaison between the Company and community organizations representing minorities, women, veterans, the disabled and older workers.

Q. Developing expertise and knowledge of equal employment opportunity guidelines and regulations in order to advise and update top management and supervisory personnel concerning developments affecting our equal employment opportunity program.

II. THE RESPONSIBILITIES OF SUPERVISORS AND MANAGERS

All supervisors and managers have the obligation as part of their general management objectives to support our equal employment opportunity policy and affirmative action program on a day to day basis. Specifically, they must endeavor to:

A. Respond to inquiries about our Affirmative Action and Equal Employment Opportunity Policy, after consulting with our EEO Coordinator.

B. Assist our EEO Coordinator during the investigation of allegations of discrimination.

C. Participate in recruitment and accommodation efforts designed to enable disabled individuals, disabled veterans and others to secure employment and to advance to positions for which they are qualified.

D. Ensure that all federal and state posters explaining the laws prohibiting discrimination are properly displayed.

E. Participate in the development and implementation of affirmative action programs.

IDENTIFICATION OF PROBLEM AREAS

I. UNDERUTILIZATION

The EEO Coordinator conducted a Utilization Analysis for the 2013 Plan Year comparing the workforce representation of minorities and females to their statistical availability by job group. The Utilization Analysis led the Company to identify underutilization and set goals where appropriate.

The Company is addressing these potential problem areas through specific action oriented programs, which are described in the section of this plan entitled "Action Oriented Programs." Our Utilization Analysis and Goals are contained behind the tabs, so named, in this affirmative action plan.

II. ADVERSE IMPACT

To determine if our selection procedures have an adverse impact upon minorities and females, we conducted an adverse impact analysis upon our selection decisions. We compared the selection ratios of minorities and females to those of non-minorities and males, respectively, in the areas of hiring, promotion and termination.

As a result of our adverse impact analysis, we examined each of the selection decisions that occurred in job groups where adverse impact was discovered as described in the Action Oriented Programs section of our plan.

III. COMPENSATION

The Company analyzed compensation to determine whether there are any gender-, race-, or ethnic-based disparities. Where the analysis identified such disparities, the Company examined each area pursuant to our Action Oriented Programs.

IV. IN GENERAL

In addition to the above, the EEO Coordinator will, on an annual basis, as applicable, identify potential problem areas in the total employment process, which may include review of the following areas:

A. Composition of the workforce by minority group status and sex.
B. Composition of applicant flow by minority group status and sex.
C. Overall employee selection process including position specifications, application forms, interviewing procedures, test administration, test validity, referral procedures, final selection process and other employee selection procedures.
D. New hires, promotions, terminations, etc.
E. Utilization of training, recreation and social events and other programs that are sponsored by the Company.
F. Technical phases of compliance with laws prohibiting discrimination in employment and promoting affirmative action programs, e.g., retention of applications, notifications to subcontractors, etc.
G. "Underutilization" of minorities or women in specific job groups.
H. "Under-representation" or "Concentration" of minorities or women in specific departments.
I. Lateral or vertical movement of minority or female employees occurring at a lesser rate than that of non-minority or male employees.
J. The selection process eliminating a significantly higher percentage of minorities or women than non-minorities or men.
K. Application and other pre-employment evaluation forms or procedures not in compliance with federal or state law.
L. Position descriptions inaccurate in relation to actual functions and duties of that particular job.
M. De facto segregation, by race or sex, existing in job titles or job groups.
N. Seniority provisions contributing to overt or inadvertent discrimination by minority group status or sex.

O. Non-support of our affirmative action and equal employment programs and policies by managers, supervisors or employees.
P. Minorities or women significantly underrepresented in training or career improvement programs.
Q. Lack of formal techniques for evaluating effectiveness of the programs set forth in this Plan.
R. Subcontractors and vendors not notified of their responsibility to assist the Company in attaining the goals and objectives set forth in this Plan.
S. Equal Employment Opportunity clause not included in leases, purchase orders or other contracts covered by Executive Order 11246.
T. Equal employment posters not on display.

If the EEO Coordinator's review indicates that the above-listed problems exist or that other impediments are blocking the entry of minority groups or women into our workforce or into specific jobs or job groups, the Company will consider corrective action, as outlined in the Action-Oriented Programs section.

ACTION-ORIENTED PROGRAMS

The Company intends to meet the goals set forth in this plan and to continue implementation of its equal employment opportunity policies through action-oriented programs. Described below are the types of actions the Company may consider:

I. DISSEMINATION OF EQUAL EMPLOYMENT OPPORTUNITY POLICY

A. INTERNAL DISSEMINATION

The Company will take the following actions to disseminate its Affirmative Action and Equal Employment Opportunity Policy, as appropriate, on a regular and continuing basis.

1. Including the Affirmative Action and Equal Employment Opportunity Policy statement in its policy manual and employee handbook, as published.
2. Meeting with supervisory personnel to explain the intent of the Affirmative Action and Equal Employment Opportunity Policy and their individual responsibilities for its implementation.
3. Scheduling special meetings with employees or using Company newsletters to discuss and explain individual employee responsibilities or opportunities under the affirmation action program.
4. Discussing our equal employment policy during any orientation programs we hold, at which time all new employees (and if applicable, transferred and promoted employees) will be advised of our commitment to affirmative action and equal employment opportunity.
5. Posting the Affirmative Action and Equal Employment Opportunity Policy, along with all required State and federal informational posters on our bulletin boards and updating such posters as required. Our "Affirmative Action and Equal Employment Opportunity Policy Statement," "Invitation To Covered Veterans To Self Identify," "Invitation to Individuals with Disabilities to Self Identify" and all required federal and state posters are posted in the facility.
6. Including pictures of both minority and non-minority men and women in all employment and consumer advertising.

B. EXTERNAL DISSEMINATION

Our equal employment opportunity policy will be disseminated externally, as considered appropriate, as follows:

1. All recruiting sources, when utilized, will be advised of the Company's policy. The Company will ask for written acknowledgment by each such recruiting source that it will comply with our policy. Thereafter, on a regular basis, such recruiting sources will be notified of our

continuing commitment to equal employment opportunity.

2. The equal opportunity clause will be included in all purchase orders, leases, contracts, etc., covered by Executive Order 11246, as amended.
3. When we advertise for prospective employees, the advertisement will include language that communicates that we are an Equal Employment Opportunity Employer, such as "We are an Equal Employment Opportunity Employer M/F/D/V." We also will direct all advertising media not to place help-wanted advertisements in race or sex-segregated columns.
4. Prospective employees are informed that the Company is an equal opportunity employer which maintains an affirmative action program through the notices we post in areas accessible to applicants and employees and our application for employment.
5. Our primary subcontractors, vendors and suppliers will be sent written notification of our Affirmative Action and Equal Employment Policy. Implementation will require assurances of compliance with, inter alia, Executive Order 11246, the Vietnam Era Veterans' Readjustment Assistance Act of 1974 and the Vocational Rehabilitation Act of 1973. Similar assurances will be required from new subcontractors, vendors and suppliers as such relationships are established.
6. In the event that employees are featured in help-wanted, product or consumer advertising, employee handbooks or manuals or similar publications, both minority and non-minority men and women will be pictured and included.

II. RECRUITMENT AND HIRING

A. Contacting community agencies and educational institutions and seeking referrals of qualified individuals to increase the flow of minority and female applicants.

B. Contacting the State Division of Employment Security and notifying area and regional employment agencies of our hiring needs and equal employment opportunity policies.

C. Including presentations by minority, female, disabled, older or veteran employees; explanations about the job duties and responsibilities of current and future job openings; explanations of our employee selection process; and distribution of recruiting literature when meetings are held with representatives of recruiting sources.

D. Featuring minorities and women when recruiting or consumer advertising includes pictures of employees or work situations, as appropriate.

E. Placing a reasonable proportion of our help-wanted advertising in media directed to minorities and/or women.

F. Evaluating and analyzing job requirements using job-performance criteria. Special attention will be given to academic, experience and skill requirements to insure that such specification are consistent and are free from bias on account of race, color, religion, age, disability, veteran's status, sex or national origin. Where requirements screen out a disproportionate number of candidates from protected groups, the continued use thereof will be evaluated and "validation" will be considered.

G. Selecting and training personnel involved in recruiting, screening, selection, promotion, disciplinary and related processes to eliminate bias in all personnel actions.

H. Avoiding interviewing or recruiting techniques, such as unscored interviews, consideration of arrest records or credit references, which are not reasonably related to the job in question and disparately affect a group protected by law or Executive Order 11246.

III. ADVANCEMENT IN EMPLOYMENT

With regard to our promotion and transfer procedures, we will consider the following:

A. Posting or otherwise announcing appropriate promotion and transfer opportunities.

B. Compiling an inventory of academic, skill and experience levels of individual employees, including minorities and women, which are relevant to performance of jobs within each job group.
C. Initiating necessary remedial job training and work-study programs, if possible.
D. Developing and implementing formal employee evaluation programs.
E. Assuring that job descriptions are based on job-related criteria.
F. Requiring managers and supervisors to submit written justification for their decision when apparently qualified minority or female employees are passed over for advancement, transfer or training.
G. Establishing formal career counseling programs, including attitude development, educational aid, job rotation and similar programs.

IV. SEPARATION FROM EMPLOYMENT

When minorities, women or other persons placed through affirmative action efforts or protected by law have experienced adverse personnel decisions, such as termination we will consider:

A. Sending an exit interview form to or conducting exit interviews with employees who resign to ascertain the reasons for their voluntary termination and to try and identify "voluntary resignations" that have been caused by unlawful conduct by employees or supervisors.
B. Determining reasons for such adverse decisions, including involuntary terminations, and establishing whether persons not in the protected group with similar work histories and violations of work rules have also been terminated.
C. Attempting to counsel employees about unsatisfactory job performance at least 90 days prior to involuntary termination to provide an opportunity to correct their performance, as practicable.

V. COMPANY SUPPORT OF COMMUNITY ACTION PROGRAMS

The Company notifies appropriate public and private organizations, as noted throughout this Plan, of its commitment to equal employment opportunity and affirmative action and will seek referrals of minorities, women, the disabled, veterans and older workers from those sources. In addition, the Company supports the community in which it resides.

INTERNAL AUDIT AND REPORT SYSTEMS

I. DATA TO BE SUMMARIZED BY JOB GROUP AND JOB TITLE

Depending upon occurrence and frequency, summary reports will be prepared for the following actions:

A. Applicants - A record of applicant flow will be maintained showing each applicant's name, race and sex, referral source, job and job group applied for and disposition of the application (hired or rejected).
B. New Hires - Date of hire, name, race, sex, age, disability and veteran's status of the hired applicant, as well as the salary rate and position will be noted.
C. Promotions/Transfers - Date of promotion/transfer, the employee's name, race, sex, age, disability, veteran's status, as well as that employee's old and new departments, job groups, rates of pay and job titles will be recorded.
D. Terminations - (voluntary, involuntary) - Date of termination, name, race, age, veteran's status, disability, sex, position, job title, job group and salary of the terminated employee will be recorded.

II. AUDITS TO BE PERFORMED

A. This Plan will be reviewed and updated at least annually with new goals to be established after

each update and review, as needed. Our plan is updated on an annual basis.

B. All hiring, promotion, placement, etc., will be compared with established goals to measure progress toward attainment thereof.

C. The EEO Coordinator will review progress toward meeting the goals and objectives set forth herein on a periodic basis. Following such review and discussion sessions, recommendations to remedy any unsatisfactory aspects of the Company's employment practices will be made and incorporated into the Plan. The supporting data for the audit and recommendations may be attached to the Plan.

AFFIRMATIVE ACTION PLAN FOR INDIVIDUALS WITH DISABILITIES

I. REASONABLE ACCOMMODATION

The Company endeavors to reasonably accommodate qualified disabled applicants and employees so that they can perform the essential functions of jobs at the Company.

II. REVIEW OF JOB QUALIFICATIONS

The Company regularly reviews its job qualifications.

III. STATEMENT OF POLICY

A. Policy

It is the policy of the Company to take affirmative action to ensure equal employment opportunity for disabled persons. This policy covers all aspects of employment including, but not limited to, hiring, assignment, promotion, demotion, transfer, termination, wage and benefit administration, and selection for training.

In order to implement this policy, the Company will make good faith efforts to accommodate the physical and mental limitations of qualified disabled employees or applicants unless such an accommodation would impose undue hardship on the Company's business, require substantial financial cost and expense, or place in jeopardy the safety of the disabled individuals, his or her co-workers, the Company's security, customers of this Company or the general public.

B. Limitations

Individuals who meet the following criteria will be considered for employment or promotion, if otherwise qualified:

1. The employee or applicant is qualified to perform the essential functions of the job or could be qualified to perform the essential functions if the Company made a reasonable accommodation.
2. The employee or applicant can perform the essential functions of the job without unreasonable risks to the safety of the individual, his or her co-workers, the Company's security or the general public.

C. Interpretation

Each disabled employee or applicant will be evaluated on an individual basis with respect to his or her ability to perform a particular job. Disabilities which interfere with the performance of a specific job shall not disqualify a person from employment in another job if the criteria for that job are satisfied.

IV. DEFINITION OF DISABLED PERSON

Federal regulations define a "disabled individual" as any person who:

A. has a physical or mental impairment which substantially limits one or more of such person's major life activities; or

B. has a record of such impairment; or

C. is regarded as having such an impairment.

V. AFFIRMATIVE ACTION MEASURES

The Company will consider the following affirmative action measures:

A. Posting, in appropriate places, informational posters or notices required by federal and state laws and regulations pertaining to the employment of disabled persons.

B. Documenting accommodations made to assist disabled applicants or employees. Such records will be supplied to and maintained by the EEO Coordinator. Department Managers and supervisors will assist the EEO Coordinator in the documentation of accommodation efforts.

C. Placing special emphasis, insofar as it is economically feasible and practical, upon the removal of architectural barriers to the disabled when designing new construction or remodeling old facilities.

D. Taking affirmative action to employ and advance in employment qualified disabled individuals at all levels of employment, including the executive level. Such action will apply to all employment practices including, but not limited to, the following: hiring; upgrading; demotion or transfer; recruitment or recruitment advertising; layoff; termination; rates of pay or other forms of compensation; and, selection for training, including apprenticeship.

1. Proper Consideration of Qualifications

To the extent possible, the Company will review its personnel procedures to determine whether such procedures assure careful, thorough and systematic consideration of the job qualifications of known disabled applicants and employees for vacancies filled either by hiring or promotion, and for all training opportunities offered or available. To the extent that it is necessary to modify personnel procedures, the Company will develop new procedures for this purpose and will incorporate them in our affirmative action program. These procedures will be designed to facilitate review by the EEO Coordinator and/or representatives of federal or state compliance agencies.

2. Physical and Mental Qualifications

(a)The Company regularly, and at least annually, will review all physical or mental job qualification requirements to insure that, to the extent qualification requirements tend to screen out qualified disabled individuals, they are job-related, and consistent with business necessity, and/or required for the safe performance of the subject job. See Section II, above.

(b) Whenever the Company utilizes physical or mental job qualification requirements in the selection of applicants or employees for employment or any change in employment status, such as promotion, demotion or training, to the extent that qualification requirements tend to screen out qualified disabled individuals, the requirements should be related to the specific job or jobs for which the individual is being considered, consistent with business necessity and necessary for the safe performance of the job.

(c)Whenever an applicant or employee provides information about a physical or mental impairment that substantially limits a major life activity or such information is revealed through a post-offer medical examination, such information shall be kept confidential, except that:

(i) Supervisors and managers may be informed regarding restrictions on the work or duties of disabled individuals and appropriate accommodations;

(ii) First aid and safety personnel may be informed, when and to the extent appropriate, of conditions that might require emergency treatment; and,

(iii) Government officials investigating compliance with the Vocational Rehabilitation Act shall be informed as appropriate.

(d) Such a medical examination shall consider only job-related characteristics in a fair and consistent manner.

3. Accommodations to Physical and Mental Limitations of Employees

The Company will endeavor to reasonably accommodate the physical or mental impairment that substantially limit major life activities for employees and applicants, unless such an accommodation would impose an undue hardship on the conduct of the Company's business. In determining the extent of our ability to reasonably offer an accommodation, the following factors, among others, will be considered: (1) business necessity; (2) financial cost; and, (3) resulting benefit to the Company and the disabled individual. See Section I, above.

4. Compensation

In offering employment or promotions to disabled individuals, the Company will not reduce the amount of compensation offered because of an individual's receipt of disability income, pension or any other benefit from another source.

5. Outreach, Positive Recruitment and External and Internal Dissemination of Policy

We will review our employment practices to determine whether personnel programs provide the required affirmative action for employment and advancement of qualified disabled individuals. Based upon the findings of such reviews, we will, as is appropriate, undertake outreach and positive recruitment activities, such as those listed below. It is not contemplated that we will necessarily undertake all of the listed activities or that our activities will be limited to those listed. The scope of our efforts clearly will depend upon the relevant circumstances, including our size, resources and the extent to which existing employment practices are adequate. Thus, we will consider the following:

(a)Sending written notification of the Company's EEO/AA policy commitments to vocational rehabilitation agencies for the disabled.

(b) Developing internal communication procedures to disseminate our obligation to engage in affirmative action efforts to employ qualified disabled individuals, to foster understanding, acceptance and support among our executives, management staff, supervisors and all other employees and encouraging such persons to take the necessary action to aid in meeting this obligation.

(c)Developing reasonable internal procedures to ensure that our obligation to engage in affirmative action to employ and promote qualified disabled individuals is fully implemented.

(d) Informing employees and prospective employees periodically about our commitment to engage in affirmative action to increase employment opportunities for qualified disabled individuals.

(e)Enlisting the assistance and support of recruitment sources of or for disabled individuals to assist us in our efforts to provide meaningful employment opportunities to qualified disabled individuals.

(f) Reviewing employment records to determine the availability of promotable and transferable qualified disabled individuals presently employed, and to determine whether their present and potential skills are being utilized or developed.

(g) Including disabled employees when employees are pictured in consumer, promotional or help-wanted advertising.

(h) Sending written notification of this policy to all subcontractors, vendors and suppliers.

(i) Taking positive steps to attract qualified disabled persons not currently in the workforce who have requisite skills and can be recruited through affirmative action measures.

6. Internal Dissemination of Policy

Our outreach program will receive strong support from supervisory and management personnel. To assure employee cooperation and participation in our efforts, we will adopt, implement and disseminate this policy internally, by considering use of the following procedures, as deemed appropriate:

(a)Including it in our policy manual;

(b) Publicizing it in the Company's annual report and other reports;

(c)Conducting special meetings with executive, management and supervisory personnel to explain the intent of the policy and individual responsibility for effective implementation, clarifying the Company's Policy;

(d) Scheduling special meetings with all employees to discuss the Policy and explain individual employee responsibility.

(e)Discussing the Policy thoroughly in both employee orientation and management training programs;

(f) Including articles on accomplishments of disabled workers in the Company's publications;

(g) Posting the Policy on the Company's bulletin boards, including a statement that employees and applicants are protected from coercion, intimidation, interference or discrimination for filing a complaint or assisting in any investigation of discrimination against any disabled person; and,

(h) Including disabled employees when employees are featured in employee handbooks or similar publications for employees.

7. Responsibility for Implementation

Our EEO Coordinator will implement this affirmative action program, and will consider:

(a)Developing policy statements, affirmative action programs, and internal and external communication procedures. The procedures may include regular discussions with managers, supervisors and employees to ensure that this policy is followed. In addition, managers and supervisors may be advised that:

(i) As a general management objective, their work performance is being evaluated on the basis of their affirmative action efforts and results, as well as other criteria.

(ii) The Company is obligated to prevent harassment of employees placed through affirmative action efforts.

(b) Identifying problem areas through discussions with management and known disabled employees, assist in the implementation of our affirmative action programs, and develop solutions to problems.

(c)Designing and implementing audit and reporting systems that will:

(i) Measure effectiveness of our programs;

(ii) Indicate the need for remedial action;

(iii) Determine the degree to which our objectives have been attained;

(iv) Determine whether known disabled employees have had the opportunity to participate in educational, training, recreational and social activities provided by the Company; and,

(v) Ensure that the Company is in compliance with applicable state law and all implementing regulations.

(d) Serving as liaison between the Company and federal and state compliance agencies.

(e)Serving as liaison between the Company and organizations of and for disabled persons, and arrange for the active involvement by Company representatives in the community service programs of local organizations of and for the disabled.

(f) Keeping management informed of the latest developments in the entire affirmative action area.

(g) Arranging for career counseling for known disabled employees.

E. Development and Execution of Affirmative Action Programs

The Company will consider the development and execution of the following programs:

1. Making job qualification requirements available to all members of management involved in the recruitment, screening, selection, and promotion process.
2. Evaluating the total selection process including training and promotion to ensure freedom from the stereotyping of disabled persons in a manner which limits their access to jobs for which they are qualified.
3. Selecting and training all personnel involved in recruitment, screening, selection, promotion, disciplinary, and related processes to ensure that the commitments in this Affirmative Action Plan are implemented.
4. Holding formal briefing sessions with representatives from recruiting sources, during which the Company may provide, inter alia, explanations of current and anticipated future job openings, position descriptions, worker specifications, explanations of the selection process and recruiting literature. Making arrangements for referral of applicants, follow-up with sources and feed-back about the disposition of referred applicants.
5. Including qualified disabled persons on the personnel relations staff.
6. Having employees with disabilities available for participation in career days, youth motivation programs, and related activities in their communities.
7. Incorporating special recruiting efforts at schools or other institutions to reach disabled students.
8. Participating in work study programs with rehabilitation facilities and schools which specialize in training or educating disabled individuals.
9. Using available resources to continue or establish on the job training programs.

* * * *

Although the Company does not use sheltered workshops, it realizes that contracts with sheltered workshops do not constitute affirmative action in lieu of employment and advancement of qualified disabled individuals in the contractor's own workforce. Contracts with sheltered workshops may be included within our affirmative action program, if the sheltered workshop trains employees for the Company and the Company is obligated to hire trainees at full compensation when such trainees become qualified as a "qualified disabled individual" as defined in 41 CFR §60-741.2.

F. The EEO Coordinator will post the Invitation to Disabled Individuals to Self Identify. A copy of the Invitation is included at the end of this section.

G. The Company will consider maintaining the following records concerning disabled employees covered by this policy:

1. Annotating appropriate personnel form(s) of each known disabled individual to identify each vacancy for which that disabled individual has been considered and making such records available for review by the Company's personnel officials for use in investigations and internal compliance reviews.
2. Placing notations on the personnel record of each known disabled employee of each training promotion for which the disabled employee has been considered, and the result of that

consideration, including the reasons for any decision.

3. Appending to the personnel file or application form a statement of reasons for rejection each time that a known disabled employee or applicant is rejected for employment, promotions or training. This statement will include a comparison of the qualifications of the disabled applicant or employee and the person(s) selected, as well as a description of the accommodations considered. This statement will be made available to the applicant or employee concerned as appropriate.
4. Including with the application form or personnel record a description of any accommodation which makes it possible for a disabled individual to perform a job.

AFFIRMATIVE ACTION PLAN FOR COVERED VETERANS

I. REVIEW OF JOB QUALIFICATIONS

The Company reviews job qualifications as new positions become available.

II. STATE JOB SERVICES

To focus our efforts to recruit qualified covered veterans, we will also notify the state employment service of our hiring needs and equal employment opportunity policies.

III. STATEMENT OF POLICY

A. Policy

It is the policy of the Company to ensure equal employment opportunities for covered veterans. This policy covers all aspects of employment including, but not limited to, hiring, assignment, promotion, demotion, transfer, lay off or termination, administration of wage and benefit programs and selection for training.

In order to implement this policy, the Company will make reasonable good faith efforts to accommodate the physical or mental limitations of qualified disabled veterans, unless such an accommodation would impose an undue hardship on the Company, e.g., requiring substantial cost or expense, or placing in jeopardy the safety of the individual employee, his or her co-workers, the Company's security, its customers or the general public.

B. Limitations

Individuals who meet the following criteria will be considered for employment or promotion if otherwise qualified:

1. The employee or applicant is qualified to perform the basic requirements of the job in question or could be qualified to perform those basic job requirements if the Company were able to make a reasonable accommodation.
2. The employee or applicant can perform the requirements of the job without unreasonable risks to the safety of the individual, his or her co-workers, the Company's security, its customers or the general public.

C. Interpretation

Each veteran will be evaluated on an individual basis with respect to his or her ability to perform a particular job. Disabilities which interfere with the performance of a specific job will not disqualify a veteran from employment in another job for which the applicant or employee may be qualified.

IV. IMPLEMENTATION RESPONSIBILITY

A. Our EEO Coordinator is responsible for the development and implementation of the Company's policy regarding the employment of covered veterans in compliance with the Vietnam Era Veterans' Readjustment Assistance Act.

B. In addition, all managers and supervisors are responsible for the continued implementation of the provisions of this affirmative action program in their work areas and as part of their general management objectives will be evaluated, in part, based upon their implementation efforts.

V. DISSEMINATION OF THE POLICY

A. Internal Dissemination

The Company will consider taking the following actions to internally disseminate its policy:

1. Distributing copies of this policy setting forth our affirmative action efforts to enhance the employment and advancement opportunities of covered veterans and discussing it with managers and supervisors to make certain they are aware of our commitment to the employment and advancement of qualified covered veterans and to elicit their understanding and support of this program.
2. Having the Company's employment and accommodation policy statement concerning covered veterans available for inspection by all employees or applicants in the EEO Coordinator's office during normal business hours.
3. Discussing in appropriate management, supervisory and employee meetings our commitment to employ and promote covered veterans.

B. External Dissemination

To the extent it is consistent with the size of and number of job vacancies available at the facility, we will consider developing contacts with appropriate local and state agencies and community service organizations that maintain programs for covered veterans. Such sources may include but are not limited to the veterans' employment representatives at applicable state Departments of Labor and area offices of the Department of Veterans Affairs and veterans' counselors on college campuses as available and appropriate.

VI. DEFINITIONS

A. For government contracts of $25,000, or more entered into prior to December 1, 2003, the following definitions apply:

1. Special Disabled Veteran

Special Disabled Veteran means a person who:

a. Is entitled to disability compensation (or who but for the receipt of military retired pay would be entitled to compensation) under laws administered by the Department of Veterans Affairs for a disability: (i) rated at 30% or more; or (ii) rated at 10% or 20% in the case of a veteran who has been determined under 38 U.S.C §3106 to have a serious employment handicap; or

b. Was discharged or released from active duty because of a service-connected disability.

2. Veteran of the Vietnam Era

V eteran of the Vietnam era means a person who:

a. Served on active duty for a period of more than 180 days, and was discharged or released therefrom with other than a dishonorable discharge, if any part of such active duty occurred (i) in the Republic of Vietnam between February 28, 1961, and May 7, 1975, or (ii) between August 5, 1964, and May 7, 1975, in all other cases; or

b. Was discharged or released from active duty for a service-connected disability if any part of such active duty was performed (i) in the Republic of Vietnam between February 28, 1961, and May 7, 1975, or (ii) between August 5, 1964 and May 7, 1975, in all other cases.

3. Other Protected Veteran

Other Protected Veteran means a person who served on active duty during a war or in a

campaign or expedition for which a campaign badge has been authorized under laws administered by the Department of Defense.

4. Recently Separated Veteran

   Recently separated veteran means any veteran during the one-year period beginning on the date of such veteran's discharge or release from active duty.

B. For government contracts of $100,000, or more entered into or modified on or after December 1, 2003, the following definitions apply:

1. Disabled Veteran

   Disabled veteran means a veteran:

   a. Of the U.S. military, ground, naval, or air service who is entitled to compensation (or who but for the receipt of military retired pay would be entitled to compensation) under the laws administered by the Secretary of Veterans Affairs or

   b. Who was discharged or released from active duty because of a service-connected disability.

2. Recently Separated Veteran

   Recently separated veteran means any veteran during the three-year period beginning on the date of such veteran's discharge or release from active duty in the U.S. military, ground, naval or air service.

3. Armed Forces Service Medal Veteran

   Armed Forces service medal veteran means any veteran who, while serving on active duty in the U.S. military, ground, naval or air service, participated in a United States military operation for which an Armed Forces service medal was awarded pursuant to Executive Order 12985.

4. Other Protected Veteran

   Other protected veteran means a veteran who served on active duty in the U.S. military, ground, naval or air service during a war or in a campaign or expedition for which a campaign badge has been authorized under the laws administered by the Department of Defense.

VII. ADDITIONAL AFFIRMATIVE ACTION MEASURES

The Company will consider the following affirmative action measures:

A. Endeavoring to make reasonable accommodations for the limitations of disabled veterans in those jobs where the safety of the employee, his or her co-worker, or the general public will not be jeopardized.

B. Informing employees of our commitment to the employment and advancement of qualified covered veterans and obtaining their cooperation in achieving the objectives set forth in this policy statement.

C. Posting in appropriate places such posters and notices as are required under the federal and state laws and regulations pertaining to the employment of veterans. A copy of the Invitation to Veterans to Self-Identify is attached at the end of this section.

D. Documenting accommodations made to assist disabled veterans, including having the EEO Coordinator maintain such records and having department managers assist the EEO Coordinator by making and maintaining such records and documenting all accommodation efforts.

E. Endeavoring to undertake as appropriate affirmative actions to employ and advance in employment qualified covered veterans at all levels of employment. Our actions will apply to all employment practices, including but not limited to hiring, upgrading, demotion, transfer, recruitment or recruitment advertising, layoff, termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship and on-the-job training programs. Thus, the

Company will consider:

1. Reviewing its personnel processes to determine whether present procedures assure careful, thorough and systematic consideration of the job qualifications of known covered veteran applicants who apply for job vacancies filled either by hire, transfer, or promotion and for all training opportunities offered or available. In determining the qualifications of a covered veteran, the Company will consider only that portion of the individual's military record, including discharge papers, relevant to the specific job qualifications for which the veteran is being considered. To the extent that it is necessary to modify any personnel procedure to avoid adversely affecting covered veterans, the Company will endeavor to develop such new procedures as are required to fulfill our objective. These procedures also will be designed to facilitate review of our implementation of these requirements by compliance agencies as well as by our EEO Coordinator.
2. Physical and Mental Qualifications
   a. The Company regularly, and at least annually, will review physical or mental job qualification requirements to insure they are job-related, consistent with business necessity and necessary for safe performance of the job. See Section 1, above.
   b. Whenever the Company applies physical or mental job qualification requirements in the selection of applicants for employment or any employee's change in employment status, such as promotion, demotion, or training, such qualification requirements will be related to the specific job or jobs for which the individual is being considered, consistent with business necessity and necessary for the safe performance of the job.
   c. Any comprehensive medical examination will be used only in accordance with the requirements of this policy. Whenever the Company inquires into an applicant's or employee's physical or mental condition or conducts a medical examination, information obtained in response to such inquiry or examination shall be kept confidential except that:
      i. Supervisors and managers may be informed regarding restrictions on the work or duties of disabled veterans and appropriate accommodations;
      ii. First-aid and safety personnel may be informed, when and to the extent appropriate, of any condition that might require emergency treatment; and
      iii. Government officials investigating compliance with the Vietnam Era Veterans' Readjustment Assistance Act or state law shall be informed of data necessary to investigate compliance with those laws.
3. Accommodation to Physical and Mental Limitations of Employees

   The Company will endeavor to make a reasonable accommodation to the physical and mental limitations of disabled veterans unless such accommodation would impose undue hardship on the conduct of the Company's business. In determining whether an accommodation will impose an undue hardship, we will consider:

   a. Business necessity;
   b. Financial costs and expenses required for or incurred as a result of the subject accommodation; or
   c. The impact of such accommodation on the nature of the job or the Company's practices.
4. Compensation

   In offering employment or promotions to covered veterans, we will not reduce the amount of compensation offered because of any disability income, pension or other benefit the applicant or employee receives from another source.
5. Outreach, Positive Recruitment and External Dissemination of Policy

The Company may review its employment practices to determine whether personnel programs properly provide affirmative action for the employment and advancement of qualified covered veterans. Based upon the findings of any such reviews, the Company will consider undertaking appropriate outreach and positive recruitment activities, such as those listed below.

a. Developing internal communication procedures to disseminate our commitment to engage in affirmative action efforts to employ and advance qualified covered veterans in such a manner as to foster understanding, acceptance and support among our executives, managers, supervisors and employees and to encourage such persons to take actions necessary to aid the Company in meeting this obligation.

b. Developing reasonable internal procedures to ensure that our obligation to engage in affirmative action to employ and promote qualified covered veterans is fully implemented.

c. Informing all employees and prospective employees periodically about our commitment to engage in affirmative action to increase employment opportunities for qualified covered veterans.

d. We also will consider utilizing recruiting sources such as:

   i. Local veterans employment representatives at the applicable state Department of Labor nearest each establishment where hiring takes place to recruit qualified covered veterans;

   ii. Regional Veterans Administration representatives at the office nearest each establishment;

   iii. The Office of the National Alliance of Businessmen nearest each establishment where hiring takes place in order to participate in the Jobs for Veterans Program.

   iv. Veterans counselors and coordinators ("Vet-Reps" and "VCIPS") on college campuses for the recruitment of covered veterans; and

   v. Local or national veterans' groups active in the area surrounding establishment where hiring and recruitment takes place.

e. Reviewing employment records to determine the availability of promotable and transferable qualified covered veterans presently employed and to determine whether their present and potential skills are being fully utilized or developed.

f. Sending written notification of our affirmative action policies to all subcontractors, vendors and suppliers.

g. Considering programs to recruit qualified covered veterans who are not currently in the workforce, have requisite skills and can be recruited through affirmative action measures. The scope of any efforts will depend upon many circumstances including our size, resources and the extent to which existing employment practices are adequate.

6. Internal Dissemination of Policy

To make our outreach program effective, we will develop adequate internal support from supervisory and management personnel and our employees. To assure employee cooperation and participation in our efforts, we will consider implementing and disseminating our policy internally as follows:

a. Including it in our policy manual and employee handbook as published or revised;

b. Publicizing it in employee publications;

c. Conducting special meetings with executive, management and supervisory personnel to explain the intent of the policy and individual implementation responsibility;

d. Scheduling special meetings with all employees to discuss the policy and explain individual employee responsibilities;

e. Discussing the policy thoroughly during employee orientation and management training programs;

f. Including in Company publications articles on accomplishments of covered veterans;

g. Posting the policy on our bulletin boards, including a statement that employees and applicants are protected from coercion, intimidation, interference or discrimination for filing a complaint or assisting in an investigation under the Vietnam Era Veterans' Readjustment Assistance Act;

h. Keeping management informed of the latest developments in the entire affirmative action area; and

i. Participating in veterans "job fairs" whenever possible.

i. Recruiting efforts at all educational institutions should incorporate special efforts to reach covered veterans.

ii. An effort should be made to participate in work-study programs with Veterans Administration rehabilitation facilities which specialize in training or educating disabled veterans.

iii. The contractor should use all available resources to continue or establish federally-assisted apprenticeship and on-the-job training programs under 38 U.S.C. 1787.

7. Responsibility for Implementation

Our EEO Coordinator will implement this affirmative action program and will consider participating in the following:

a. Developing policy statements, affirmative action programs, and internal and external communication procedures. Procedures may include regular discussions with managers, supervisors and employees to ensure the Company's policies are being followed. In addition, supervisors may be advised that:

i. As a general management objective, their work performance is being evaluated on the basis of their affirmative action efforts and results as well as other criteria.

ii. The Company is obligated to prevent harassment of employees placed through affirmative action efforts.

b. Identifying potential problem areas, in conjunction with line management and known disabled veterans, in the implementation of our affirmative action programs.

c. Designing and implementing an audit and reporting system that should:

i. Measure effectiveness of our affirmative action programs;

ii. Indicate need for possible remedial action;

iii. Determine the degree to which the Company's objectives have been attained;

iv. Determine whether known covered veterans have had the opportunity to participate in all educational, training, recreational and social activities provided by the Company; and

v. Ensure that the Company is in compliance with the Vietnam Era Veterans' Readjustment Assistance Act and applicable state Department of Labor implementing regulations.

8. Training

Employees involved in the recruitment, screening, selection, promotion, disciplinary and related processes will undergo training so that they are aware of our affirmative action program related to covered veterans.

11.B. PROPOSER AAP

We are firmly committed to EEO and the continued advancement of diversity in the workforce. We will implement a program of affirmative action to discover, eliminate or mitigate artificial barriers and to increase opportunities for the recruitment and advancement of individuals without regard to race or gender or any other protected characteristic. We will ensure practices of non-discrimination and equal opportunity and utilize best practices to promote a proactive approach to affirmative action and EEOD. We strive to create and foster an environment that affirms and values the diversity of our workforce.

Our AAP for the MBTA Service will be based on a thorough analysis of the current workforce and all policies and procedures put in place by the current operator. This will help us to identify the areas on which our affirmative action needs to be focused, to ensure equal employment opportunity for all current and potential employees, and to attract applicants from under-represented categories. Assessing not only instances of disparate treatment, but also areas of adverse impact, will help us to make the workforce representative of the people they serve.

Below we describe the goals of our AAP, as well as the main initiatives related to employment-related decisions included in our Plan. The Director - EEOD will finalize our AAP within 120 days after award of the contract. We will consult the employees' unions in the finalization of the AAP, will ask them to endorse the AAP and, in the process of mandatory collective bargaining, will use our best efforts to ensure that contract language in collective bargaining agreements is not inconsistent with or exclusive of the AAP, particularly language regarding non-discrimination and seniority.

The draft AAP in its current version follows. We will ensure that our AAP is a "living" document, by reviewing and updating it annually.

11.C. BEST PRACTICES SUPPORT

Our initiatives for improving EEOD at the MBTA Service have been described in detail in Sections A and B, and are summarized in the figure presented next.

Area	Initiative	Innovative	Best Practice	Beneficial to MBTA Customers	Cost Efficient	Support
Organizational	Full-time, dedicated, professional director - EEOD as part of the key managers		✓	✓		Pages 11-2 and 11-9
	Creating an Affirmative Action Committee (AAC)	✓	✓	✓	✓	Pages 11-9 to 11-10
Recruitment	Use of best practice recruitment process in all hiring activities	✓	✓	✓	✓	Page 11-10 and Figures 11-5 to 11-8
	Creating diverse hiring committees	✓	✓	✓	✓	Page 11-10
	Partnerships with recruiting firms and trade union organizations	✓	✓	✓	✓	Pages 11-10 and 11-11
Supervision and Evaluation	Using the Keolis performance management process to promote the career advancement of all employees	✓	✓	✓	✓	Page 11-11
Training	Using training to retain staff	✓	✓	✓		Page 11-11
	Using training to educate all staff on diversity issues		✓	✓		Pages 11-11 and 11-13
Promotions and Transfers	Internal professional networking programs	✓	✓	✓	✓	Pages 11-11 and 11-12
	Coaching and mentoring opportunities	✓	✓	✓	✓	Page 11-12
Termination & Resignation	Exit interviews with members of protected groups who are terminated, laid off or resign	✓	✓	✓	✓	Page 11-12

Figure 11-9: EEO Best Practices

As the figure above shows, our initiatives for improving EEOD during the contract term are innovative, best practice, beneficial to the passengers and cost efficient.

Our initiatives outlined in this plan are based on experience and best practice in other Keolis and SNCF operations. They have proven to be effective in providing opportunities for women and minorities and will help us to achieve our objective of employing a workforce that is representative of the Boston population.

By ensuring that our workforce is representative of the people who use the MBTA Service, and increasing the number of women and minorities among our employees, we will be able to better communicate and relate to customers who are members of protected groups. This will be beneficial to the passengers, as we will be able to better **Think like a Passenger**, by identifying and fulfilling the needs of every individual customer on the service.

All initiatives described in this plan are cost effective and require only minimum financial investment. Our approach to EEOD is based on the fact that creating an organizational culture that is free of bias and discrimination relies on every member of the organization knowing, accepting and living the values of diversity and inclusion. No form of financial investment can substitute for this.

SECTION 12
Mobilization Plan
Evaluation Factor Information

SECTION 12 — MOBILIZATION PLAN EVALUATION FACTOR INFORMATION

Contents

12. INTRODUCTION 2
I. Executive Summary 2
II. The MBTA's Objectives as We Understand Them 2
III. Our Assessment of the Current Situation 4
IV. The Results We Will Deliver 7
12.A. MOBILIZATION PLAN 8
12.A.1. Staffing and Organization Plans, including Designation of Key Management Personnel 21
12.A.2. Employee Hiring Plans 22
12.A.3. Description of Training Programs 27
12.A.4. Transition and Service Continuity Plans 31
12.A.5. Temporary Physical Plant Requirements 32
12.A.6. Access Arrangements Required from the MBTA 32
12.A.7. Support Required from the MBTA 32
12.A.8. Communications and Information Management System Implementation Plans 33
12.A.9. Schedule for Delivery of All Plans and Fulfillment of All Activities Required During the Mobilization Period 36
12.A.10. Plans and Procedures for Ensuring Full Implementation of the Commuter Rail IT Environment by the Agreement Services Commencement Date 49
12.B. MOBILIZATION PRICE FORM 51
12.C. BEST PRACTICES SUPPORT 51

12. INTRODUCTION

I. Executive Summary

The MBTA delivers commuter rail services for 125,000+ passengers a day and, through its commuter rail contract operator, provides employment to 2,000+ employees and managers. Transitioning such an extensive commuter operations and maintenance organization must be seamless for customers and employees. It also provides an ideal opportunity to establish a change in the management culture. This document lays out our plan for **Moving Further Together** during Mobilization.

The Four Cornerstones of Our Approach to Mobilization

Throughout the past five decades, Keolis & SNCF have developed a systematic, employee and customer-centered approach to mobilizing operations and maintenance of commuter rail services. We will successfully apply this same approach and will do so in our approach to Mobilization with the MBTA. Our approach utilizes four proven cornerstones:

- ***Safe and seamless transition for customers and employees, with proper training, continuity and transition plans.*** We will empower managers to insure that a safe and seamless transition environment for all activities is maintained at all times by involving our key managers through daily and weekly meetings and providing proper safety training.
- ***Safe and seamless transition for the MBTA, with consistent and complete communication with the MBTA and the incumbent.*** We have developed a detailed Mobilization Milestone Schedule which identifies the progress and sequence for completing all Mobilization activities and which will serve as the roadmap for the Mobilization Team, which includes specialists from operations and other fields. The Mobilization Milestone Schedule shows all contractual milestone dates, including those for submission of plans, programs, schedules and forms, as well as critical paths of activities. Our General Manager (GM) will ensure the fulfillment of all activities required during Mobilization and will ensure complete communication with the MBTA by submitting written progress reports to the MBTA and setting up weekly meetings with the MBTA personnel.
- ***Change Management.*** It is far easier to introduce this change during the formative period subsequent to a contractor change than to drive cultural change within an organization anchored in traditional practices. Improving operational performance and customer service are the results of changing the culture of an organization, and the motivation, leadership and guidance of the key management team will be the essential first step in achieving this cultural change as further detailed in Section 8 Management Plan. This unique opportunity to create dynamism and to share a new vision with the existing workforce and the MBTA cannot be missed. We can and will transform the existing organization of the MBTA Service and create a consistent performance-focused and customer-focused culture among staff.
- ***On-time and on-budget fulfillment of all activities at minimized cost.*** We recognize that a change of contractor represents a significant investment on the MBTA's behalf and we pledge ourselves to the conduct of a cost-effective process that produces real benefits for the system. We will empower managers to insure that an on-time and on-budget transition environment for all activities is maintained at all times, including but not limited to providing corporate resources at no cost.

II. The MBTA's Objectives as We Understand Them

We understand that the objectives for the MBTA Service are focused around the following main areas:

The MBTA's Objectives	Our Approach
To identify Proposers that will ensure a seamless transition for customers and employees	We will: • Hire high-quality key managers • Develop and maintain a Mobilization Milestone Schedule which identifies the progress and sequence for completing all activities • Immediately, upon Notice to Proceed (NTP), deploy our GM and key managers to assure the timely completion of all activities • Introduce our change management philosophy that focuses on safety, quality, performance and customer service through leadership, management, employee participation, accountability and training • Augment and expand the capabilities and the reach of the permanent management team with additional corporate resources including, but not limited to, peer technical committees who have successfully completed commuter rail and public transportation service mobilization efforts • Conduct focused, effective orientation sessions for the employees and provide reassurance • Ensure that our employees have the proper training and tools to perform their jobs safely and efficiently from Commencement Date, including but not limited to safety training • Develop and implement a strong Quality Plan that includes performance monitoring and enhancement at all levels • Conduct a complete Joint Audit of the system to ensure a safe and seamless transition for all • Work closely in partnership with the MBTA to develop and conduct a community information/ outreach program to inform passengers about the coming transition • Focus on training including but not limited to safety and security training • Order uniforms (rentals) before Commencement Date to ensure the continuity of employee motivation and performance • Run a parallel payroll system to ensure a seamless transition
To identify Proposers with the demonstrated capacity to establish all operational support and administrative functions and to prepare all necessary documents in a timely and professional manner	We will: • Develop and maintain a Mobilization Milestone Schedule which identifies the progress and sequence for completing all Mobilization activities and has proven to be successful in our other start-ups and service transitions • Immediately start preparing all ODRLs and having them ready for MBTA review and approval within the required schedule • Provide corporate resources and peer review committees as needed so that several of the ODRLs will already be under initial preparation or completion at the time we receive NTP • Maintain close contact with the MBTA relative to progress, schedule and milestones through various means, including but not limited to written progress reports and weekly meetings • Order uniforms (rentals) before Commencement Date to ensure the continuity of employee motivation and performance • Run a parallel payroll system to ensure a seamless transition

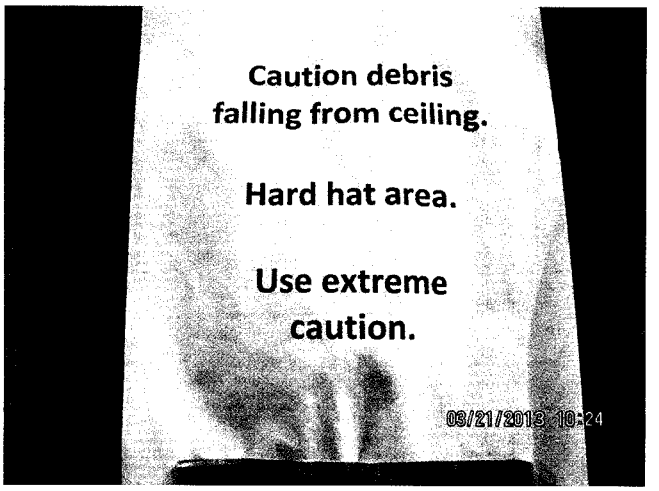
The MBTA's Objectives	Our Approach
To identify Proposers with a commitment to ensure consistent and complete communication with the MBTA	We will: • Determine the schedule, events and the participants that will create a comprehensive communications program between our key managers and the MBTA • Assure that our Information Technology system and our reporting/recordkeeping system, both of which will be developed during Mobilization, fully support all the requirements of this overall communications plan • Maintain close contact with the MBTA relative to progress, schedule and milestones through various means, including but not limited to written progress reports and weekly meetings
To identify Proposers that will minimize overall mobilization and contract cost to the MBTA	We will: • In addition to our key managers and the Steering Committee, several of whom will not be a direct cost to the Mobilization effort, utilize peer technical committees and corporate resources, both in the U.S. and internationally, to perform various activities such as recruiting and training to assure that our Mobilization effort is as cost-effective as possible • Work to satisfy the requirements of the RFP with existing features of the commuter rail system that can be adapted such as the use/upgrade of other existing IT tools, when feasible • Deploy our simulator in Boston *at our own cost - a $680k savings for the MBTA*

III. Our Assessment of the Current Situation

Over the past 12 months, we have committed a great deal of time and resources to learning about the MBTA Service, participating fully in the Pre-Proposal Property Condition Assessment, reviewing the information provided to us by the MBTA and looking at the Commuter Rail Property from every angle. The following is a brief synopsis of some of our observations which are further detailed in the specific section of this proposal:

Personnel/Training: We have found that employees in the field are very competent in their area of expertise, but have not been trained to recognize the impact their actions have on the success of the MBTA Commuter Rail Service. Similarly, managers are reportedly technically qualified, but lack leadership, as they have not had the training required to turn proficient technicians into inspiring managers as explained in Section 8 Management Plan.

Administration & Finance: Currently the Material Management and Purchasing departments are within the Finance Department, without a formal communication between the Finance Department and Mechanical Department to set out the expected compliance levels as explained in Section 8 Management Plan.



Safety and Regulatory Compliance: A comprehensive safety assessment is provided in Section 2 Safety Plan. Our findings, and the resultant impressions that we have developed regarding the very critical issue of overall system safety within this service, are that there are many ways to improve it. While the FRA reportable injury ratio has declined over the past 10 years, other key indicators of the overall safety program have not improved and there have been several regulatory

issues during that period that we feel could have been be avoided with the introduction of a comprehensive safety culture, as well as an effective safety plan, into the MBTA Service.

We understand that following an OSHA audit at Somerville facility in October 2012, health and safety violations have been reported. During our visit to the Mechanical Department facilities, we have identified several dangerous work situations such as operators operating a crane or working in the pit under the train without wearing their personal protective equipment.

Security, Emergency Preparedness and Emergency Response: In our estimation, the primary role of the operator for the MBTA Service is to assure complete familiarity with the activities and programs of the MBTA Police; to function as an extra resource assisting the MBTA Police in whatever way may be requested to keep the commuter rail system as safe and secure as possible; and to assure that all operator personnel receive the training and have the requisite familiarity with the MBTA Police programs and initiatives to be able to assist if called upon to do so.

Mechanical Services: As further illustrated in Section 4 Mechanical Services Plan, benchmarks which we have developed show that the current fleet is performing at a lower level of effectiveness, reliability and availability than comparable U.S. commuter rail fleets. We have carried out an initial assessment of the condition of the fleet during the Pre-Proposal Property Condition Assessment. While we acknowledge that some of the inspected equipment appears to be nearing the end of its useful life, including the single level coaches and the F40PH-2 locomotives, we have identified a number of areas of concern — among them improperly stenciled air brake dates, disconnected or inoperative trap door heaters, coach floor damage, locomotive truck condition and cleanliness, oil leaks, windshield and carbody corrosion - that we believe are due to improper maintenance or lack of adherence to generally accepted protocols. Finally, we have identified a subset of the single level coach fleet that shows severe corrosion on car bodies and interior collision corner posts.

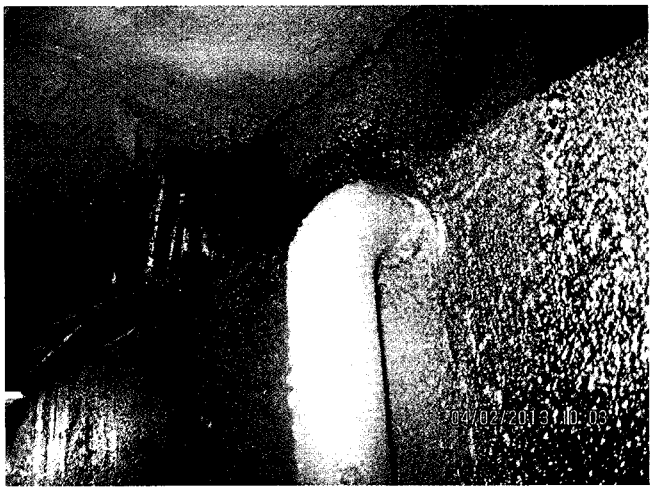


Figure 1: Underframe of Locomotive

Figure 2: Windshield Corrosion with Heavy Oil and Grease Buildup

Engineering Services: During the Pre-Proposal Property Condition Assessment, we were able to observe a significant amount of the physical asset inventory that will be maintained by the Engineering Department. We discovered that, for the most part, the physical infrastructure was constructed to the relevant standards in place at the time of construction; we also found that significant improvements in each asset's life-cycle can be realized by combining SNCF engineering standards and methods with the current practices in a robust and efficient manner.

Our analysis is further amplified in Section 5 Engineering Services Plan.

Transportation Services: Our analysis, in Section 6 Transportation Services Plan, indicates that we can achieve a higher level of On Time Performance (OTP) on the MBTA Service, more thorough fare enforcement and improved asset utilization. Our efforts in this regard will include more in depth delay analysis and management follow-up, better crew and equipment scheduling/cycling and a systematic management program to balance mileage and utilization of the MBTA's fleet.

Customer Service: As further detailed in Section 7 Customer Service Plan, based on our customer survey, the current situation tells a story of a significant drop in ridership, counter to the national trend of growing use of commuter trains. Ridership in the MBTA Service has declined 10.5 percent from 2003 through 2012, while at the same time commuter train ridership across the United States *has increased by 14.7 percent during that same time period*. The testimonies we have gathered show a situation that is simply not acceptable. That situation should have been assessed through proper processes, measurements, and improvements that are the basics for implementing quality and that we will put in place during Mobilization.

Management: The current organization is led by a team of functionally skilled managers, who lack the passenger focus that is necessary to reach excellent customer service results. The Deputy GM title is attached to the General Counsel position, which dilutes the importance of the role. Quality is a trait that should be embedded in the corporate culture, however Quality is a function that was added to the current incumbent's organization after 10 years. Moreover, the Director of Strategic Planning and Chief of Staff positions seem to be organizationally isolated and have no team reporting directly to them. Management should be more consistent and more unified.

Information Technology and Information Security: Based on the KPMG audit, it appears that the system may be lacking good strategic planning and proper financial investment. The environment appears to have expanded organically without the benefit of data integration and application consolidation. The resulting systems and applications represent piece-meal solutions and many separate streams of maintenance and approach. In fact, many key infrastructure components (servers, networking equipment, server software, etc.) are either about to schedule off warranty or are not currently under warranty. The risk inherent in running an IT Environment under these conditions is extremely high and to mitigate risks, critical infrastructure systems should be replaced during Mobilization. We have determined through laptop express service numbers that a number of existing laptops will need to be replaced. The software on all desktop systems is currently at older revisions and will need to be upgraded/replaced. By way of extrapolation we can assume that most of the Commuter Rail IT Environment will need to be replaced or upgraded by Commencement Date. We also believe that some required elements and systems were not identified in the MBTA documentation, namely Human Resources, Financial, and ERP solutions which we are ready to address.

Materials Management and Procurement

The Materials Management systems, procedures and policies are not being used to their highest potential. Materials Management and Procurement are not being centralized and asset management / inventory control are not being integrated among the various departments. This has the potential to increase costs and reduce efficiencies. Specifically, the assets register was not available during procurement; we believe that since the assets are being paid for the MBTA, such asset registry shall be available at all times.

Disadvantaged Business Enterprise

We met with Ms. Michelle N. Morin, Management Analyst, and with Mr. Reginald A. Nunnally, Executive Director of the MassDOT Supplier Diversity Office who were pleased to consider opportunities to have the SDO and the

MBTA Service work together for the *first* time. As a result, they kindly offered their support providing subcontractors with information on DBE certification and training and participated in our Outreach Events to promote awareness of our company.

Equal Employment Opportunity (EEO)/ Diversity

We will improve the commitment to diversity as well as the transparency of our efforts, by providing comprehensive information spontaneously, in addition to responding to the minimum legal requirements. Having met with a representative of the MassDOT Supplier Diversity Office, who gave us an insight into their vision and goals for EEO and Diversity, we recognize that a key priority for MassDOT and MBTA is to have access to information which goes beyond the legal reporting requirements. This has not been done. We will ensure that our Director - EEO, Diversity DBE and the members of the Affirmative Action Committee are available to meet, work with and respond to any inquiries from the MBTA, to ensure that we support the MBTA to become the area's leader in EEO and Diversity issues.

IV. The Results We Will Deliver

Based on our experience in service transitions, our results-oriented mobilization process takes into account levers such as integration teams, speed, leadership, communications, retention, and culture, and uses best practice processes, tools, and measurement to ensure success. We will provide the following success factors of Mobilization which are described later in the Plan:

- **Effective project management**
- **Targeted support at minimized costs**
- **Close coordination and communication with key stakeholders**
- **Accelerating all aspects of the human resources and workforce transition**
- **System-wide audit and evaluation of physical assets**
- **Ensuring regulatory compliance**
- **Coordination of activities**

Our commitment to providing a safe, seamless, transparent and effective transition from the current operator will be at the heart of our Mobilization Plan. Putting safety first, we will deliver the performance that riders of the MBTA Service deserve. Partnering with the MBTA and all other stakeholders, we'll be **Moving Further Together**, delivering the following results:

Our Results	Objectives
Personnel Recruitment/ Training Readiness *on-time and on-budget*	Complete the preparation and submission of all ODRLs, FRA-required programs and other regulatory requirements in close coordination with the MBTA Ensure that all employees are informed and reassured and for those who will choose to remain in place, fully understand their new employer and their role/responsibility in the new organization Ensure that all employees are properly trained and qualified/certified when required and that all training programs are fully developed To the extent approved by the MBTA, conducting a community outreach campaign to make ourselves known to the communities in the MBTA Service

Our Results	Objectives
Administration/Finance Readiness *on-time and on-budget*	Complete the preparation and submission of all ODRLs, FRA-required programs and other regulatory requirements in close coordination with the MBTA Have new rail labor union agreements in place Establish all HR administrative, payroll, benefits and training programs Establish the financial framework Place all required insurances and acquiring all required financial guarantee instruments before the start of Mobilization activities, consistent with the requirements of the Operating Agreement Execute all subcontractor agreements, including those applying to DBE's To the extent approved by the MBTA, conduct a community outreach campaign to make ourselves known to the communities in the MBTA Service
Materials Management/ Information Technology/ Quality Assurance/ Transportation Service/ Mechanical Service/ Engineering Service/ Environmental/ Safety/Regulatory/Security Readiness *on-time and on-budget*	Complete the preparation and submission of all ODRLs, FRA-required programs and other regulatory requirements in close coordination with the MBTA Ensure full continuity and functionality of service at all times Conduct a Joint Audit and develop a Plan in close coordination with the MBTA to continuously improve the condition and performance after Commencement Date Monitor the performance to determine immediate adjustments that will serve to enhance the operation Ensure that all employees are properly trained and qualified/certified when required and that all training programs are fully developed including but not limited to security/emergency response

Figure 12-1: Our Mobilization Results

These results will cover a wide variety of aspects that will benefit the MBTA and the passengers and will be achieved through innovative methods and techniques that are described in this Plan.

12.A. Mobilization Plan

Our experience of managing successful mobilizations

We have a proven track record of mobilizing contracts of a similar size and/or complexity to the MBTA Service contract such as Melbourne in Australia; Transpennine, Southern, Southeastern, and London Midland in the UK and VRE and Las Vegas in the U.S. Our team of local and international experts will provide great value to the MBTA, drawing on Keolis and SNCF experience of start-up situations. We have a proven track record in this regard with a series of successful startups and service transitions, and we are committed to providing a safe and effective transition of the MBTA Service.

Our depth of local and international experience will provide great value to the MBTA and to the MBTA's riders. We can draw on a broad base of experience from similar operations throughout the world.

A large number of public agencies and authorities have decided to end their relationship with other operators - relationships sometimes older than 30 years old like in Bordeaux, France - and have entrusted the service to us. Our values are built on partnership, transparency and a desire to treat operations as our own. We are committed to a long-term partnership with our clients. This commitment starts at NTP and is being demonstrated all along the mobilization activities that we make and that we implement upon approval of our clients. Our transition strategy has been a success for service start-ups throughout the world. A few examples are presented next.

CASE STUDY: Keolis Rail Services America Mobilization and Transition of the Virginia Railway Express

Keolis Rail Services America won the contract to operate the Virginia Railway Express (VRE) commuter rail in July 2009 and began preparing for transition in October 2009, to ensure the start date of July, 2010 would be met. The incumbent contractor had operated the service for 18 years, since the line came into operation. The local public transportation authority had no experience of managing a transition to a new operator and did not enter into a transition agreement with the incumbent contractor before announcing that they had awarded the contract to KRSA. As a consequence of this, the incumbent was not contractually required to cooperate with KRSA.

KRSA's management team for the service tried to interact with the incumbent contractor's employees beginning in January, 2010, to introduce them to KRSA and encourage them

CASE STUDY, continued: Keolis Rail Services America Mobilization and Transition of the Virginia Railway Express

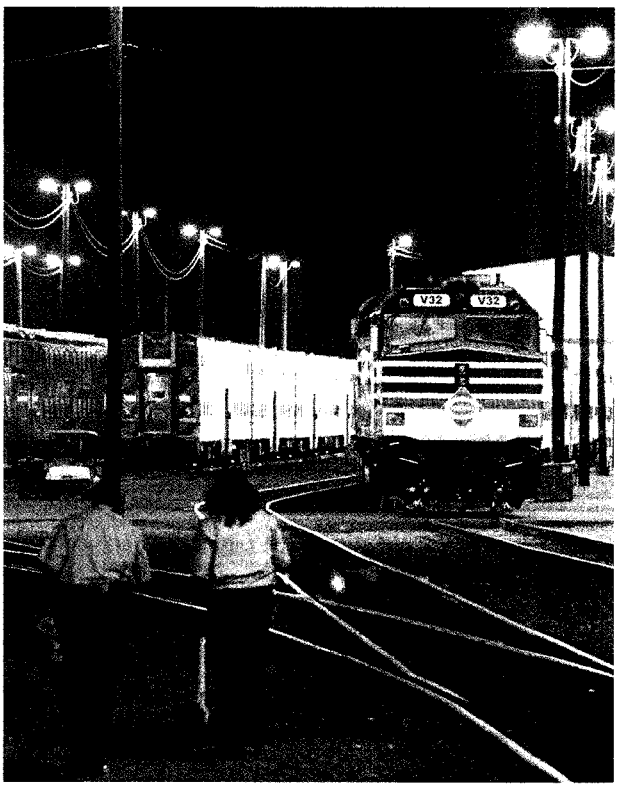
to transition to the new contractor. However, the employees were not willing to engage with the KRSA management team, because they were afraid of losing their positions with the incumbent contractor. The employees were also offered incentives by the incumbent operator to stay with them and refuse to transition to KRSA. With this climate of fear as a backdrop, only one of the incumbent contractor's engineers transitioned to KRSA.

With limited time to recruit the 50-60 engineers and conductors needed to run the service from July, 2010, the management team used their contacts to attract engineers and conductors elsewhere in the country. The vast majority of engineers and conductors recruited by KRSA in this way came from outside Virginia and did not know the VRE operation. KRSA helped them to relocate to Virginia with their families and began training them on the physical characteristics of the VRE lines in May 2010.

The incumbent contractor refused to let KRSA engineers ride alongside their engineers to be able to complete their mandatory route learning and KRSA and the local transportation authority responded by implementing extraordinary weekend runs on the two lines, to ensure that operational staff could complete their training in time for the transition.

Despite all the difficulties KRSA faced during mobilization and transition, KRSA successfully created the operating company from scratch within six months, including recruiting all needed conductors and engineers from outside the region, organizing their relocation and training them on local railroad operations.

The mobilization phase was completed in partnership with the VRE agency. KRSA began running services on July 12, 2010 and passengers have been positive about the change in operator. Since KRSA took over the service, ridership has increased by several thousand passengers a day, which is an indication of the success of KRSA's approach.



LAS VEGAS, NV

Our objective was to make sure that this transition was a positive and seamless experience for all. To do so, we established and followed a very well defined transition plan with small measurable goals to be achieved. We were able to reassure the unions, the employees and RTC, our client. A total of nine "Meet and Greets" meetings were held over three days, with an average of about 70 applicants showing up at each meeting. As a result, we received more than 800 applications for 550 positions and managed to establish a cooperative relationship with the local management team of the incumbent, Veolia, from which we bought out the remainder of their inventory and equipment. The RTC Assistant General Manager, M.J. Maynard, said she couldn't be happier with this partnership: the RTC is highly satisfied with the process and our professionalism.

BORDEAUX (FRANCE)

One of our most significant recent transitions included the retention of 1,950 employees for the operation of Bordeaux's network, which had been operated by Veolia staff for the previous 30 years, an operation similar in size to the MBTA Service. Our first actions were to present to the employees our strategy, values and vision and involve the local Agencies and passengers through public meetings. The transition of Bordeaux was the starting point of a new era for public transport in the city, with a significant increase in ridership of 25% since 2010. In 2012, the public transport ridership increased by 7.7% and the use of VCub, the bike sharing program, by 10%. This increase continues thanks to many of our specific services, offering better visibility for the customers (express trains).

ORLÉANS (FRANCE)

The Orléans Public Transit Agency took the risk of changing its urban network operator less than one-year before launching its second light rail line. The Agency appreciated our support of the system and the stakeholders during the difficult time of transition. We worked in partnership with its subcontractors to ensure that all contracts, especially for the maintenance of trams with Alstom, were signed on time. A strong dedicated team of experts and engineers were available to support these efforts. Eric Chareyron, Marketing Director, personally monitored the implementation of the new network. We succeeded in reassuring employees, inhabitants and stakeholders through demonstrated commitment that included, organizing consultations, meetings and forums to discuss any possible issues. During the three month transition period, we adapted our approach to include the suggestions of key stakeholders to deliver the best possible service.

Our vision for the MBTA Service

Our vision for the MBTA Service is to build on and, in collaboration with the MBTA, deliver a world-class rail system that will be a source of pride for the residents and businesses in the New England region. Our vision will be achieved by focusing on the objectives outlined in this proposal that are driven by our commitment to us **Moving Further Together**.

Our proposed approach was augmented by the deep understanding of the MBTA's operating characteristics, philosophy and goals gained by our team while previously working for the MBTA Service. We have identified this project as one of "strategic importance" and desire to synchronize and align its goals and vision with those of the MBTA to facilitate maximum synergies in redefining current commuter rail methodologies. We have both the knowledge and the resources to assist the MBTA in realizing this goal for its future service. We have committed to providing the best Mobilization and Operations and Maintenance key managers, selected from successful projects both in the United States and throughout the world, to make the MBTA Service Mobilization a success.

Key Success Factors of Mobilization

From our experience mobilizing and transitioning the services shown above, we will provide:

- ***Effective project management:*** Detailed planning and management of the process in the form of a Mobilization Milestone Schedule, further detailed in this Plan, will be carried out by our General Manager and his key management team, overseen by the Steering Committee.
- ***Targeted support at minimized costs:*** We will provide corporate resources including peer review committees at our own cost, and will draw on the dedicated resources of our Steering Committee to provide targeted support to our key managers.
- ***Close coordination and communication with key stakeholders:*** We will coordinate effectively with the MBTA, the incumbent, the unions, the FRA and all other entities involved in Mobilization through various written periodic reports and meetings.
- ***Accelerating all aspects of the human resources and workforce transition:*** Our experience shows that employees will naturally be anxious about their role in the new organization. We will provide accelerated orientation training sessions, communicate information about KCS and its parent companies through various means, and carry an early recruitment process to fill vacant positions, if necessary.
- ***System-wide audit and evaluation of physical assets:*** We will participate in the Joint Audit and perform an inventory/evaluation of the physical and non-physical assets involved in the MBTA Service with the MBTA. This will ensure that both the MBTA and our team have a clear understanding of the existing condition of the system and that programs may be developed and implemented to bring it up, at a minimum, to a state of good repair level, if necessary.
- ***Ensuring regulatory compliance:*** We will prepare the ODRLs and all required FRA plans and programs for submission to and/or review and approval by the MBTA and the FRA, respectively. We will ensure that this is given a high priority among all the activities.
- ***Coordination of activities:*** We will coordinate with all relevant parties, including the MBTA and the incumbent, to develop, maintain and administer the project schedule of all services and responsibilities identified in the Mobilization Milestone Schedule presented further in this Plan. Our effort goes beyond exercising processes that have served us well. We intend to capitalize on and welcome the opportunity to assist the MBTA in "re-launching" the MBTA Service by having our team focus on customer service, performance and reliability to the passengers. We do this through the use and management of better operating tools and best practices, including smarter ways to manage the day-to-day business using successful methods from other projects, for the benefit of the MBTA Service.

	Area	Pre-Mobilization/Mobilization activities and initiatives
B.1 / B.2	Mobilization Office Infrastructure / Office / Staff Support	• Setting up a "war room" to monitor all mobilization activities • Producing ODRLs # 3.12-001 to 3.12-011, 3.9-001, 3.9-003, 3.9-004, 3.9-015, 3.9-018, 3.9-019 • Establishing a series of technical committees, whose activities will be monitored by the Steering Committee • Conducting On-Board Management Workshops
	Community Outreach	• Setting up Focus Groups • Conducting Operation Lifesaver and Educational outreach • Meeting with Community Leaders • Meeting with Community Colleges
C.1	Personnel Recruitment / Training	• Producing ODRLs # 3.10-003 to 3.10-005, 3.10-007 to 3.10-018, 3.10-021 to 3.10-023, 3.10-025, 3.10-026, 3.10-028 • Establishing a dialogue with employees through road shows introducing KCS to employees, frequent updates on mobilization activities and a telephone / email helpline to answer individual questions • Creating employment files for every employee • Verifying licenses, qualifications and certifications of each employee for KCS' records and to meet FRA requirements • Conducting negotiations with the unions to implement labor agreements to take effect on the start date • Conducting Drug & Alcohol Testing and Employee Physicals for all employees • Conducting advertisement & recruitment • Preparing Orientation/Training Materials • Focusing on Safety & Security training • Assisting employees regardless of whether they decide to join KCS or not • Ordering uniforms (rentals) before Commencement Date to ensure that the employees are all set
C.2	Administration / Finance Readiness	• Establishing the financial framework for the contract • Placing all required insurances and acquiring all required financial guarantee instruments before the start of Mobilization activities, consistent with the requirements of the Operating Agreement • Establishing the legal framework for the contract • Establishing our corporate identity • Conducting negotiations with the unions to implement labor agreements to take effect on the start date • Implementing a project agreement covering the Joint Audit with the MBTA and the process for compensation when appropriate (change order, dispute resolution etc.) • Running a parallel payroll system to ensure a seamless transition
C.3	Materials Management Readiness	• Producing ODRL's # 3.4-001 to 3.4-007, 3.4-010 and 3.4-011, 3.4-013 to 3.4-016, 3.4-019 to 3.4-022, 3.4-030, 3.4-033, 3.4-034 • Conducting the Joint Audit with the MBTA of all of the Service Equipment, Service Property, and Support Property System, to give the MBTA and KCS a clear and accurate assessment of the overall condition of the system

	Area	Pre-Mobilization/Mobilization activities and initiatives
C.4	Information Technology Readiness	• Integrating and implementing management information systems for service management, service reporting and MBTA system interfaces, consistent with the requirements of the RFP • Purchasing hardware/software for Mobilization Staff • Purchasing of hardware/software for Permanent Staff • Implementing and integrating the ServiceNow ITP platform and the RIFD tracking and ticketing system • Designing and monitoring system implementation • Assuring and enhancing network design and operations and establish network monitoring • Installing a VOIP to assist the Customer Service Department • Conducting the Joint Audit with the MBTA of all of the Service Equipment, Service Property, and Support Property System, to give the MBTA and KCS a clear and accurate assessment of the overall condition of the MBTA Service
C.5	Quality Assurance Readiness	• Producing ODRLs # 3.6-001 to 3.6-012, 3.6-015 • Implementing our Quality Assurance Program, to satisfy the quality and environmental requirements contained in the RFP • Constantly monitoring current train operations to determine immediate adjustments that will serve to enhance the operation and maintenance activities • Conducting Joint Audit with the MBTA of all of the Service Equipment, Service Property, and Support Property System, to give the MBTA and KCS a clear and accurate assessment of the overall condition of the system
C.6	Transportation Services Readiness	• Producing ODRLs # 3.1-001, 3.1-007, 3.1-011, 3.1-012, 3.1-021 to 3.1-024 • Constantly monitoring current train operations to determine immediate adjustments that will serve to enhance the operation and maintenance activities • Deploying simulator in Boston at *our own cost - a $680k savings for the MBTA*
	Customer Service Readiness	• Producing ODRLs # 3.7-001, 3.7-007, 3.7-008, 3.7-012, 3.7-014 • Developing and implementing various KPIs and other quality programs, policies and procedures
C.7	Mechanical Services Readiness	• Producing ODRLs # 3.3-001 to 3.3-012, 3.3-014, 3.3-016, 3.3-018 to 3.3.-022, 3.3-024, 3.3-025, 3.3-028 • Purchasing Material Inventory, Consumables, Tools • Purchasing Equipment/Supplies for Joint Audit • Conducting the Joint Audit with the MBTA of all of the Service Equipment, Service Property, and Support Property System, to give the MBTA and KCS a clear and accurate assessment of the overall condition of the MBTA Service
C.8	Engineering Services Readiness	• Producing ODRLs # 3.2-001, 3.2-017, 3.2-018, 3.2-024, 3.2-026, 3.2-028, 3.2-029, 3.2-037, 3.2-039, 3.2-050, 3.2-052, 3.2-054, 3.2-057, 3.2-059, 3.2-061, 3.2-066, 3.2-074, 3.2-078, 3.2-080, 3.2-082, 3.2-084 to 3.2-086, 3.2-087, 3.2-091, 3.2-096, 3.2-097, 3.2-099, 3.2-101, 3.2-109, 3.2-110 • Purchasing Material Inventory, Consumables, Tools • Purchasing Equipment/Supplies for Joint Audit • Conducting the Joint Audit with the MBTA of all of the MBTA Service Equipment, Service Property, and Support Property System, to give the MBTA and KCS a clear and accurate assessment of the overall condition of the MBTA Service

	Area	Pre-Mobilization/Mobilization activities and initiatives
C.9	Environmental Readiness	• Production of ODRLs # 3.8-001 to 3.8-004, 3.8-007, 3.8-008, 3.8-011, 3.8-012, 3.8-014, 3.8-015, 3.8-018, 3.8-021, 3.8-020, 3.8-024, 3.8-027, 3.8-033, 3.8-037 to 3.8-039, 3.8-040, 3.8-042 to 3.8-044 • Securing Permits/Licenses • Purchase of Equipment/Supplies for Joint Audit • Conduct Joint Audit with the MBTA of all of the Service Equipment, Service Property, and Support Property System, to give the MBTA and KCS a clear and accurate assessment of the overall condition of the system • Developing our Quality Plan, to satisfy the quality and environmental requirements contained in the RFP
C.10	Safety / Regulatory / Security Readiness	• Production of ODRLs # 3.5-001 to 3.5-003, 3.5-012, 3.5-015, 3.5-017, 3.5-019, 3.5-022, 3.5-027, 3.5-029 • Purchasing Equipment Materials for Mobilization Staff • Purchasing Equipment Materials for Permanent Staff • Deploying Operation Lifesaver • Conducting a Safety Audit with Arthur D. Little • Reviewing Emergency Testing • Focusing on Safety/Security Training (NIMS, ICS, etc.) • Complying with FRA-required programs for passenger rail systems • 49 CFR Part 213 - Track Inspection and Safety Standards • 49 CFR Part 214 - Railroad Workplace Safety • 49 CFR Part 217 - Program of Operational Tests and Inspections • 49 CFR Part 218 - Railroad Operating Practices/Blue Signal Inspection Plan • 49 CFR Part 219 - Program of Drug and Alcohol Control and Testing • 49 CFR Part 220 - Railroad Communications Procedures • 49 CFR Part 225 - Railroad Accident/Incident Reporting • 49 CFR Part 227 - Occupational Noise Exposure • 49 CFR Part 228 - Hours of Service Compliance and Recordkeeping • 49 CFR Part 229-232 - Railroad Locomotive Safety Standards and Inspection • 49 CFR Parts 233-236 - Signal and Train Control Systems • 49 CFR Part 238 - Passenger Equipment Safety Standards • 49 CFR Part 239 - Passenger Train Emergency Preparedness Plan • 49 CFR Part 240 - Locomotive Engineer Certification Program • 49 CFR Part 242 - Conductor Certification Program • 49 CFR Part 270 - System Safety Plan (Anticipated for 2014)

Figure 12-2: Summary of Our Mobilization Activities and Initiatives

Employing these key success factors, which we have refined and adapted in all aspects of Mobilization, we will provide a safe, seamless and efficient transition of the operations contract, on time and on budget, including an orderly transition of staff and all Operations and Maintenance functions. Specific elements of the functional transition programs include:

Administration / Finance Readiness

We will:

- Complete the preparation and submission of all ODRLs, FRA-required programs and other

regulatory requirements in close coordination with the MBTA

- Initiate On-Board Management Workshops as described in Section 8 Management Plan
- Focus on customer-service and performance programs such as **Think Like a Passenger**, a program that has been developed and successfully implemented throughout our operations
- Have our key managers and our corporate resources meet with the MBTA during the first week of Mobilization to finalize the Mobilization Plan which will include introducing key personnel, exchanging personal contact information, defining roles and responsibilities, establishing timelines for completion of tasks, etc.
- Comply with the methodology that will be proposed by the MBTA for the Joint Audit and finalize the plan with the incumbent
- Establish a schedule for weekly meetings between the MBTA and our key managers to monitor progress and resolve any issues or concerns during Mobilization. Included in these meetings will be the review and update of the Mobilization Milestone Schedule
- In addition to these weekly meetings, establish a series of peer review committees whose activities will be monitored by the General Manager. These peer review committees will include Transportation, Customer Service, Performance, Quality & Environmental Services, Safety, Security, Emergency Preparedness and Regulatory Compliance, Mechanical Services, Engineering Services, Materials Management, Labor Relations
- Establish relationships with the various labor organizations that currently represent employees covering the trades and crafts associated with the MBTA Service
- Build on our current working relationship with the other railroads (Amtrak, CSX, Pan Am Railways) immediately. We understand that, while we are the operator for the MBTA, it is important that existing agreements, policies, and certain protocols are multilateral in nature, with defined bilateral processes, operational and regulatory coordination and established lines of communications between other railroads and us
- Place all required insurances and acquiring all required financial guarantee instruments before the start of Mobilization, consistent with the requirements of the draft Operating Agreement
- Run a parallel payroll system to ensure a seamless transition for the employees
- Order uniforms before Commencement Date to ensure that the employees are all set

Community Outreach - With the MBTA's approval, we will provide:

- ***Focus Groups:*** Upon receiving NTP, we will set up focus groups drawn from the Boston area community. These groups will help determine and address any issues within these communities. These groups can consist of ADA officials and representatives of passenger associations. We will seek the MBTA's permission and cooperation in setting up these groups. These groups will help us to develop good working relationships within the community and will allow us to reach out to the community and continue to build a positive image of the MBTA Service.
- ***Meetings with Community Leaders:*** The MBTA Service provides service to many communities along its right-of-way. These communities are highly diverse and may require special attention to reach the levels of customer satisfaction we strive for. In order to identify the specific needs of these communities, we have initiated contact with their officials. We will continue to meet with as many such groups as possible in the future.
- ***Operation Lifesaver and Educational Outreach:*** We believe that the importance of safety cannot be overstated. We will develop a rail safety awareness campaign in cooperation with the Massachusetts Operation Lifesaver group designed to target law enforcement and emergency responders.

- ***Massachusetts Community College programs:*** We met with Gretchen E. Manning who has been of tremendous support to us and who, as a result, has agreed to assist us set up meetings with every single Community College in the area. We have also met with Roxbury Community College and Bunker Hill Community College and have started discussing about developing training programs and increased educational opportunities for our new employees.

Personnel Recruitment / Training - We will:

- Begin the collective bargaining efforts immediately
- Set up various means of communications to offer reassurance and respond to employees' questions and concerns
- Interview all the existing management staff , review their personnel records and determine individual core competencies of staff wanting to remain with the MBTA Service
- Prepare our plan for assigning employees to positions in the new organization by scheduling any required training and opportunities for exchange with our other operations
- Make employment offers to the qualified, existing workforce and verify all documentation to ensure that transfer of benefits and payroll are seamless
- Send each employee to a basic one-day training program to assure that every employee understands the objectives of the MBTA Service, the basic process by which contract services are provided, our corporate culture and the customer service program that we will be implementing, how he/she will individually participate and support the overall process, and how he/she is trained to properly fulfill the assignment and is accountable for the quality of the service
- Focus on Training, including but not limited to Safety/Security Training (NIMS, ICS, etc.)

Materials Management Readiness - Materials Management readiness largely depends on the quality of information developed for each item on the asset register within the existing Materials Management System. While we did not receive any Asset Register during the procurement process, we have a robust approach to maintenance processes and systems which will inform and ensure the development of comprehensive materials management process and procedures. The involvement of operational and maintenance managers from the start of the project will ensure our ability to meet safety, operations, engineering, mechanical, environmental, and efficiency objectives. We will:

- Reviewing asset support documentation to identify areas of non-compliance with established maintenance procedures
- Review "as-built" documentation in the Asset Registers to ensure that each asset is listed and is in a state of good repair
- Develop a specific plan for general repair and return (R&R) parts management and a more detailed warranty administration program including warranty defect repair and return
- Assess existing Materials Management system to determine whether it can be used or adapted

Information Technology Readiness - As further detailed later in this Plan, we will work to establish a strategic vision for the IT environment. As with all strategic planning, it is most important to establish the benchmark that represents existing systems, networks, databases, and applications. Audit teams, specialists in each of these critical areas, will begin the process of documenting every aspect of the existing IT environment. Not only will this establish the current systems and configurations, but the diagrams created during the process will become the base documents that will be updated for quality assurance purposes. At the same time, procurement will begin, replacing the items we already know are beyond or at the end of their lifecycles. All this will be input into a highly secure Cloud system so that the MBTA may have access to the data (ODRLs, etc.) when the MBTA

so wishes rather than at the MBTA's request. It will also reduce the cost of the IT infrastructure.

Quality Assurance Readiness - We place a high emphasis on the application of quality systems and standards as a means of ensuring continuous improvement and meeting customer, stakeholder and staff expectations. During Mobilization, we will hire experts and offer to establish quality systems processes and culture such as developing ISO 9001 and ISO 14001 standards, developing quality support systems such as surveys and models, implementing quality management processes, developing key performance indicators (KPIs), implementing performance management processes, implementing resolution and escalation processes and developing quality systems processes and procedures.

Transportation Services Readiness - We will:

- Establish working relationships with other railroads and any other entities involved in train operations of the MBTA Service
- Determine the level of Quality and Training needed, and ensure that all Transportation Managers are fully trained and qualified for the duties and responsibilities of their positions
- Review all crew assignments, spare board levels and equipment cycles to prepare for Commencement Date, and begin formulating plans for service improvements to be implemented with the MBTA's approval within a reasonable time after Commencement Date
- Assure that the Transportation function is fully coordinated with the Mechanical and Engineering functions
- Deploy our simulator at *our own cost - a $680k savings for the MBTA*

Customer Service Readiness - We will ensure a seamless transition in all customer service areas. We will follow through on all commitments to our external and internal customers. We will continue to audit and validate the current external customer service perspectives, then commence integration of our customer service plan to maintain and enhance this delivery. In so doing, we will:

- Work with the MBTA on previous customer satisfaction surveys to implement recommendations that are consistent with strategy
- Communicate our customer service strategies, as permitted, in cooperation with the incumbent and the MBTA
- Integrate existing KPIs to facilitate immediate implementation of improvement plans
- Determine the current customer service culture to begin improvements at the onset
- Meet regularly with all customer service stakeholders to establish the positive relationships we advocated in our submission in order to instill confidence that our actions match our words

Mechanical Services Readiness - We will validate our Pre-Proposal Property Condition Assessment and participate in the required Joint Audit of current facilities and rolling stock to ensure a safe working environment for the employees. Our plan will be as follows:

- Evaluate all Equipment Maintenance activities and ensure that all MBTA requirements for the shop facility and the rolling stock are maintained, operational and regulatory compliant
- Prepare to implement and maintain an FRA compliant maintenance program and a qualified maintenance person training program
- Identify, define and provide performance metrics related to equipment maintenance
- Prepare to implement plans to meet unexpected situations, emergencies and unusual events. Manage the assessment of factors and conditions affecting maintenance activities, ensuring response processes are time sensitive when communicating to the appropriate authority on matters requiring their attention
- Prepare to implement compliance amongst policies, procedures and processes to maintenance schedules, policies, procedures, and standards

- Interface with regulatory and government agencies, vendors and contractors on matters related to equipment maintenance
- Interface with the incumbent, as appropriate, on management of current productivity and overall maintenance performance; review for mechanisms that can be implemented to utilize staff in a manner that maximizes their effectiveness thereby ensuring that services are performed on time and on budget

We expect to spend significantly more time during the Joint Audit on issues identified during the Pre-Proposal Property Condition Assessment that represent significant safety issues for the passengers and the employees. A Diagnostic Assessment will therefore be completed using state-of-the-art techniques such as Diagnostic Surveys, Structured Interviews, Critical Incident Observations, and Q-Sort Analysis to collect, validate, and evaluate information on current conditions, including strengths and weaknesses of current protocols. Once the current protocols are clearly benchmarked, we will use that benchmark as a baseline for change. Improvement recommendations will then be made that include anticipated impact and potential ROI.

We understand that maintenance planning is carried out and that records are currently saved in the Maintenance Management System (MMS). The efficiency of this tool and of its use will be reviewed. If our conclusions show that this tool is not up to the challenge, we will work together with the MBTA to develop a proper solution.

During the Pre-Proposal Property Condition Assessment of the three principal fleet maintenance facilities, we identified several issues that will require a thorough investigation during the Joint Audit:

- All shop equipment including all significant OEM related paperwork
- Accumulations of industrial waste, mostly grease and oil, in working areas will require review of the industrial waste handling and shop cleaning procedures
- Material stored on shop floor utilizing a standard protocol across all facilities in order to plan for a more structured approach for handling this material.
- Car wash machines including OEM standards, latest inspection results and all maintenance records with specific attention to the car wash pumps and mechanical systems that show corrosion and deterioration.
- The South Side S&I facility could be seen as a significant source of risk and potential hazard to our employees. Therefore, we will ask for the contractual Joint Audit to be performed in this facility early and often. During the Joint Audit, we will add civil and building engineers as well as safety officers to the Audit Team.
- We noted the installation of portable industrial air compressors at many outlying layover yards. During the Joint Audit, we will seek to understand the requirements for dry compressed air in the layover yards to ensure that these portable air compressors are not injecting moisture into the rolling stock air brake systems.

In regards to revenue passenger equipment (locomotives and coaches), we noted several issues that will require more detailed investigation during the Joint Audit, including fleet maintenance records, OEM recommendation and outside investigations. They include, on the locomotives:

- Investigation and recommendations of the current locomotive truck cleaning process and status of the locomotive truck overhaul process
- 100% Joint Audit of all existing revenue and switching locomotives, with a focus on performance and paperwork review
- Detailed analysis of service failures (On-Time-Performance) and related mechanical failures (Mean Distance Between Failures)

Similarly, during the Joint Audit, we will review the coaches as follows:

- Less than a 100% Joint Audit of the cab cars and coaches, including an examination of each unit's documentation
- Review of 1005 of the classes of coaches in which significant corrosion was observed during the Pre-Proposal Property Condition Assessment.

Last but not least, we will negotiate MTBSF requirements for legacy rolling stock for each year, from calendar year 2014 through and including 2020.

Engineering Services Readiness - We will:

- Implement infrastructure maintenance activities and, after transition, ensure that all MBTA track and structures are maintained, operational and regulatory compliant
- Establish plans for prompt recovery of track infrastructure when service disruptions occur
- Implement detailed position guides for all Engineering Department personnel, establishing protocols consistent with the MBTA initiatives for performance targets and compliance with all safety policies and procedures
- Evaluate current maintenance programs, projects, initiatives, standards and business plans and integrate them with our technical plans
- Prepare and manage operating and capital budget consistent with both the MBTA and corporate objectives
- Interface with regulatory and government agencies, vendors, and contractors on all transition matters related to maintenance
- Provide safety leadership in the field, and ensure that proper protection is being provided to and used by field mobilization maintenance staff
- Slowly replace the non-revenue fleet to suit our needs during Mobilization and reduce the overall cost of the contract

Our Mobilization Team will be assisted in this effort by team members HNTB, which is heavily involved in two major projects on the commuter rail system: the upgrading of the Fitchburg Line, and the expansion of South Station, and by Keville Enterprises, which has been managing and supporting construction and improvement projects on the system for decades. The work of these two very experienced team members will focus on design if required, project scheduling and staging, project management, day-to-day construction management, schedule and budget adherence and contract compliance, including recordkeeping and reporting. The entire team will be focused on being as transparent in our management and conduct of special projects and supplemental work as we are in the daily operation and maintenance of the service.

Environmental Services Readiness - Environmental regulations play an important role in our daily operation. In this regard, we are fully committed to complying with all federal, state and local environmental protection regulations. Our specialists, together with our local subcontractors, will work to ensure that their state-of-the art environmental approaches are implemented including performing an initial environmental assessment, identifying and meeting with managers with recognized environmental responsibilities in stakeholder organizations, developing an environmental risk analysis, updating legal compliance register, collecting and reviewing environmental data and establishing processes and procedures for reporting, developing environmental KPIs for the leadership team and beginning the process for achievement of ISO 14001.

Safety Readiness - Safety is the highest priority in the operation of a railroad service. Our Director - Safety, Security, Emergency Preparedness and Response and Regulatory Compliance, with the assistance of experts, will oversee the development of all required safety and regulatory compliance programs and will be fully responsible for the implementation of all contractually-required MBTA safety programs, including our Operator Safety Compliance Plan, all FRA-required safety programs, the application of our General Safety Policy to the MBTA Service and , the coordination, integration and application of the MBTA SSPP and our Operator Safety Compliance Plan for the MBTA Service, and the elements and components of the overall safety culture that will characterize our operation and maintenance of the MBTA Service. Lastly, Arthur D. Little will prepare a comprehensive safety management program that will be administered, during Mobilization, to our GM and his key management team and then

to the rest of the management team beginning very soon after Commencement Date.

Security, Emergency Preparedness and Emergency Response Readiness - Under the direction of the Director - Safety, Security, Emergency Preparedness and Response and Regulatory Compliance, we will complete the development of an Operator System Security Compliance Plan, an Emergency Preparedness Plan and an Emergency Response Plan; begin the process of coordinating these Plans and any other necessary security documents with the MBTA; work closely with the MBTA Police Department and any other involved departments of the MBTA ; develop and prepare for implementation the entire range of security plans, training and initiatives that will govern and be administered to our employees in the MBTA Service; and familiarize all our employees with all aspects of the MBTA's security program, so that we can, at all times, play an effective role in this program. This will include specific training such as NIMS, ICS and other Homeland Security Programs. Due to the sensitivity of the nature of passenger rail services, we typically cooperate with current and/or former law enforcers to ensure the security of our passengers and of our employees. Mr. Thomas F. McCarthy, former Chief Deputy of the MBTA Police, will serve as liaison to the MBTA Police starting during Mobilization.

Regulatory Compliance Readiness - This task will be a critical path activity as the MBTA and FRA approval of our plans, programs and policies is a prerequisite to taking over the operation and maintenance of the MBTA Service. Our Director - Safety, Security, Emergency Preparedness and Response and Regulatory Compliance will have overall responsibility for the timely completion of all individual aspects of this task. We will not develop these Plans and programs in a vacuum. Rather, in concert with the MBTA, we will engage the FRA in a dialogue to discuss and describe our approach to plan/program development, implementation and compliance with all FRA regulations prior to Commencement Date. We have a strong relationship with the FRA. We have already established a working relationship with FRA Region 1 staff in Cambridge, MA and we will involve the FRA, to the extent they wish to be involved, in the development of the safety-critical regulatory plans and programs that will govern the MBTA Service. We already have in place and previously-approved by the FRA a large number of the required Plans and programs necessary to undertake passenger rail operations and maintenance activities in the United States. In some cases, those existing plans will be tailored as necessary for the MBTA Service and, if required, new plans will be developed early.

12.A.1. Staffing and Organization Plans, including Designation of Key Management Personnel

Our Mobilization Team and Key Managers for Local Decision-Making

Mobilization will require a unique management structure specifically dedicated to a safe and efficient transition to service operation. During this period, operations and maintenance managers will play a crucial role in maintaining timelines of critical project activities. Our Mobilization Team, led by General Manager George Hardwidge, will work closely with the MBTA, the other railroads, utility companies, local police and fire departments, and all of the other parties to insure that all of these activities are fully coordinated and carried out safely and efficiently.

Our Mobilization Team includes experienced personnel who are familiar with the mobilization of rail businesses in the United States and internationally. This includes experience in public to private transitions, private takeovers and company mergers, including transitions from Veolia, the current operator's major stakeholder. Many members of the team have been involved in developing our proposal. This will ensure that the Mobilization Team is familiar with the content and commitments of the Plans.

From our experience we know the importance of having the Mobilization Team, all members of which will become permanent members of our key

management, in place and fully functioning, and that many tasks need to be completed in parallel within a short time frame. To address this situation, we are proposing a qualified management team experienced in the provision of large commuter rail services. This team will employ strict management methodologies and controls to ensure there is no slippage in overall progress to the Commencement Date by maintaining a continuously open setting for communications with every stakeholder, including the MBTA.

Mr. Hardwidge, together with the rest of the Mobilization Team, will maintain the Mobilization Plan, making updates and changes. Following the initial meeting of the Mobilization Team, Mr. Hardwidge will schedule and lead the group through weekly (or more often as needed) meetings to discuss transition-related issues, review progress and forecasts, work out problems and make adjustments. This group will be accountable for each task, assigning actions to individual team members and deciding upon the formal approvals which are required to ensure that the task they are responsible for is completed on time and on budget. This team will be fully supported by our corporate resources, as described below.

Corporate and Operations Resources for Best Practices and Cost Containment

Because of the multiple tasks to be completed, we will set up peer technical committees and allocate corporate resources and resources from our other operations as an investment on our side to minimize the MBTA's cost. These individuals, such as George Walker, Gene Skoropowski, Gregg Baxter and James Stoetzel, have extensive start-up and mobilization experience in all facets of operations and maintenance, including but not limited to passenger rail services, fleet management, equipment lifecycle and performance optimization, IT, safety and security and labor relations.

Management Steering Committee for Leadership and Direction

The mobilization activities and overall service implementation will be overseen and monitored by a Management Steering Committee, made up of senior Keolis management and subject matter experts. This group will oversee and monitor the overall implementation program, throughout the process. Our Management Steering Committee will be led by Mr. Steve Townsend, President and CEO of Keolis America. It will be the responsibility of the Steering Committee to hold monthly meetings with the key managers to discuss in detail the progress and status of all mobilization activities and to order whatever corrective, remedial action is necessary if any of those activities are falling behind schedule. These meetings will have an agenda, minutes will be kept and the Steering Committee will be available to discuss our efforts with the MBTA at the MBTA's request.

We will request cooperation and coordination with the incumbent to ensure that all of our transition activities are being carried out on schedule and that these transition activities are taking place without disrupting the ongoing MBTA Service. We will invite the MBTA and the incumbent to take part in in-depth reviews throughout Mobilization to ensure that the transition is progressing to plan and that any risks or issues are addressed with effective mitigating actions.

12.A.2. Employee Hiring Plans

Our primary objective is to ensure a safe, seamless and efficient transition without incident or disruption to the service. We recognize that the transition of the workforce is a key component of Mobilization and a key factor in the continued success of the MBTA Service.

We will focus on ensuring that the organization is fully staffed and functional by arranging meetings with the employees in the existing organization, introducing KCS and the parent companies as well as to our goals for the MBTA Service. We will also gain commitment from the managers and the workforce who want to stay in the organization and identify vacancies in the organization and individuals who do not want to transfer to us, so that we can fill key operational roles in readiness for Commencement Date. Employees will meet with their representatives, arranging road shows to give individuals to

meet our managers and obtain answers to their questions, sending them information on the company and our employment offer.

We will pay special attention to key operational roles, which must be staffed to ensure the safe performance of contract services. To mitigate this risk, we will require employees currently in these roles to accept or decline our employment offer early during Mobilization, so that we may begin external recruitment efforts as soon as possible and ensure that our internal experts who will be supporting Mobilization are available to fill these key operational roles in a temporary manner. We consider all positions with safety responsibilities to be operationally critical.

Working with the Unions

Furthermore, we have recognized the labor unions that will represent our workforce. As we did in other transitions, once we have begun the process of negotiating new agreements with those labor unions, these employees will be covered by the Railway Labor Act, which prescribes a very lengthy process before any sort of job action could disrupt the MBTA Service. The combination of fair, comparable wages and benefits, inclusion in the railroad retirement system and an experienced management team that will be respectful of our workforce will all work to prevent any disruption to the MBTA Service during the transition to us as further detailed in Section 8 Management Plan.

Communicating with Employees During Mobilization

A transition of this type can be a difficult time for employees, as they are faced with uncertainty. We will make offers of priority employment to all existing incumbent employees engaged in the provision of the MBTA Service and will attempt to hire all eligible members of the current incumbent workforce. We expect the labor element of the transition to proceed smoothly and harmoniously because we will offer the same wages and benefits, and the prospect of continued employment in the same types of commuter rail service jobs that these employees are already familiar with. Accordingly, we anticipate that the transition to our employment will be seamless.

In order to minimize current employees' anxiety about their new employer, we will employ a number of communication channels to introduce ourselves and the new operating company to employees who will be transitioning to us. We will provide full transparency and ensure that all stakeholders, including employees and their union representatives, remain informed throughout Mobilization as part of the overall effort to facilitate a smooth and seamless transition.

We will also maintain morale with all staff, as employees will understand the process and the impact on their role as well as contribute to the continued smooth operation of the MBTA Service during Mobilization, as employees remain focused on meeting the needs of passengers as shown in the testimony below.

HERVÉ DEUNFF, Training Manager & Jobs Recruitment, Keolis Bordeaux
29 years of service, including 27 years with Veolia

"I knew some Keolis employees that I had met while working on common projects during my career, so I had a less negative perception of the company than some of my colleagues.

After the Keolis transition, the Bordeaux HR department underwent a re-organization in order to meet the new objectives of the proposed operations designed by Keolis. My position evolved during this process, my field of operations, initially focused on training, has expanded to Employment, Recruitment and Skills Management; the transition has been very positive for me in terms of personal fulfillment.

More broadly, the highest differentiating point between Veolia and Keolis was the quality

HERVÉ DEUNFF, continued, Training Manager & Jobs Recruitment, Keolis Bordeaux
29 years of service, including 27 years with Veolia

of their offer: We've all been "amazed" by Keolis' knowledge of the city and the quality of services offered to new customers. We now understood why Keolis had won the contract. The new network proposed by Keolis was very clear and workable; the approach was extremely intelligent and well presented by the management. Even the trade unions have praised the marketing department in their leaflets; it was a first in Bordeaux!

The transition was facilitated by strong communication, both internally and externally. The network was completely changed overnight, but thanks to the communication and active management participation, it was found that 97% of operators were positioned on routes that matched their first choice, and 100% were on routes corresponding to their top 3 choices. The team's satisfaction has enabled us to embark on this new adventure with a spirit of openness and eagerness. Because expectations and objectives were clearly defined by the management team, we knew where we were going, and this approach has reassured the rest of the team."

We will work closely with the MBTA and the incumbent to prepare the announcement of the change of operator, which will be made to employees as soon as possible after NTP. We will introduce the key members at this stage and reassure employees by informing them of the ways in which they will be able to ask us open questions and communicate with us throughout Mobilization. Specific methods of providing continued information to employees during Mobilization will include the following, which have proven successful in past transitions:

- ***Information bulletin.*** This is sent directly to employees' home addresses and informs them on the progress of our mobilization activities on a monthly basis.
- ***Q&A sessions.*** These allow individual employees to raise specific concerns and put their questions directly to our General Manager and other key managers. Sessions are held at least monthly from NTP.
- ***Telephone helpline and website with email address.*** These allow employees to ask us questions and raise concerns they may have about the mobilization and transition to us directly and obtain an answer within 24 hours.
- ***Road shows.*** Road shows will be held at weekly intervals during the first month of the Mobilization at locations convenient for the existing workforce to introduce KCS and answer any queries staff may have directly. When we transitioned the extensive streetcar network in Melbourne, Australia, we held 11 road shows in depots, workshops and infrastructure centers, meeting more than 60% of employees in person. We also hosted breakfast chats and informal meetings in all areas of the business including head office, to find out from staff what they thought needed to be improved. Involving staff in this way from the start helped us to complete the transition smoothly and reach outstanding performance levels from Commencement Date.

We will also create a welcome pack for staff which will include useful information on ourselves and which will be distributed to all our employees.

Workforce Transition Plan

In order to prepare for the transition of staff, we will undertake the following actions beginning immediately after NTP:

- Meet with the MBTA and, if possible, the incumbent's current GM and staff to discuss and agree a joint approach on communicating the transfer of the contract to KCS

- Implement employee communication tools, including telephone helpline, information bulletin, Q&A sessions and road shows
- Identify the employees eligible to be transitioned to KCS and obtain as much information as possible on these employees
- Notify the Unions in writing of the change in operator, set out the mandatory labor terms and assure them of our intention to fully comply with them
- Hold initial meetings with union representatives to begin the process of negotiating new labor agreements and advise them of the of the effects on employees
- Implement feedback mechanisms such as a web address or dedicated telephone helpline to gather thoughts from employees and respond to any concerns in relation to the transfer of their employment
- Write to relevant staff formally advising them of KCS' offer of employment and the terms and conditions of employment being offered to them and requesting the return of signed acceptance letters
- Collect signed acceptance letters from employees and arrange for recruitment for positions which will remain unfilled, as staff have refused our employment offer
- Conduct pre-employment and competency tests on all employees who have accepted employment with KCS
- Submit weekly written report to MBTA on the status and progress of the hiring process, as well as explanations for non-current operator workforce hiring
- Present employees with a welcome pack which includes a note from the President of Keolis Commuter Services , welcoming them to KCS

Management Transition Plan

As further detailed in Section 8 Management Plan, we will offer employment to all eligible management employees for at least a four month probationary period, beginning on Commencement Date. The process for transferring eligible management employees will follow the same steps as the workforce transition and is included in the table presented above. We know that our strategy works. The following testimonial is just one of the many that we have received.

Employee Competency and Pre-Employment Testing

Because we truly care about the safety of the employees and the passengers, we will conduct

Jean-Marc Robert, "Bus Autonomous Production Unit", Keolis Bordeaux

Managing 300 employees, 18 years of service (including 16 years at Veolia Bordeaux)

Local Chairman - CFE-CGC

When the announcement was made that Keolis was the new contractor, employees of Bordeaux network were very worried. Keolis managed to reassure their new employees through dialogue and transparency. The new General Manager of the Bordeaux network invited all trade unions to a presentation of the Keolis proposal. The presentation was clear, and open. Keolis' business expertise appeared to all supervisors as a true differentiating factor. The offer was extremely controlled, and expertise in transit operations emerged as a real plus. The feeling of the majority of employees was: "we are dealing with real experts, transportation experts". Veolia has thus emerged as more general, less technical.

The Keolis approach is based on customer needs: for example, meetings with local mayors allowed Keolis to define and redesign the network from the customer prospective. This approach was a radical change, and very relevant. This approach convinced us and the employees were reassured that their job functions were not necessarily going to change. Keolis committed to take the time to observe every position, not questioning the

Continued: Jean-Marc Robert, "Bus Autonomous Production Unit", Keolis Bordeaux

functions, except if it was proven that they did not comply with Keolis objectives.

In daily management, the Keolis open-mindedness has resulted in a more constructive dialogue than before: a real exchange takes place, while Veolia used to just answer questions without any commitment to dialogue. Managers are close to the "field", so their answers are pragmatic, concrete, and the resulting decisions are subject to prior debates.

To implement the restructured network, the management team had decided to constitute working groups, involving our operational partners. It was a first in Bordeaux history. The new network was built with all the trade unions, which helped to address all the issues. This approach totally reassured employees, and the transition took place without any difficulties.

Finally, the hierarchy is flat, the Management team is very accessible and communication is fluid. What is said is done, and supervisors are supported by the management team. All of the Operation managers on the project during the transition had the choice between leaving with Veolia or staying with Keolis: They all decided to continue the adventure with Keolis. They are all still present at Keolis and none regret their decisions. After two years of operations within this group, taking a step back, we see that Keolis empowers its employees, by setting clear objectives and goals that are more ambitious than Veolia's, but the means are given to achieve them, which is very stimulating."

various tests on all existing employees such as Drug and Alcohol tests, pre-employment physical, criminal background checks and driver license checks (for Certified Conductors and Engineers) for *all* employees. In addition to this, we will require *all* employees in safety-sensitive positions to provide evidence of their certification and competencies, prior to beginning to work for us. No employee who does not pass the pre-employment testing or who cannot provide evidence of their certification and competencies will be allowed to work on the service. Eligible employees who fail the testing and are not on disability due to a work-related injury, will remain on the roster listing eligible employees for 12 months after the Commencement Date.

Mitigating for Staff not Transitioning from the Incumbent

It is our intention to offer positions within the new organization to all eligible existing employees However, some employees may choose not to transition to KCS or may be eligible for retirement. We have drafted a detailed Mobilization Milestone Schedule, provided later in this Plan, which spells out each step of the transitioning process for employees. As part of this Plan we will request that the existing employees confirm or decline our employment offer early in the process, so that we have enough time to find alternative solutions for the staffing of the organization. We will also meet with the incumbent to review the workforce and the management records. We have also begun to analyze the competitive environment in which MBTA operates in order to identify alternative sources of qualified engineers and conductors for the service, should the incumbent's employees decide not to transition to KCS. We successfully filled a large amount of vacancies at the VRE in a very short timescale. We are ready to implement our proven and effective employment application, interviewing and screening process for the MBTA Service if necessary and will ensure that the employees who may elect not to join KCS get our full support.

Management of Payroll and HR Systems Change

Payroll processes must continue to operate successfully, and payments made to employees must be accurate and timely. We will work with the incumbent to achieve this and to provide the necessary reassurance to employees during the changeover period. As we do not currently have any information on any existing Payroll and Human Resources systems, we will use Mobilization Team to define our approach to the changeover by running a parallel payroll system.

12.A.3. Description of Training Programs

Orientation

After offering positions to all existing workforce and management employees of the current operator, any remaining vacancies will be filled with trained and qualified railroad personnel. They will require, in most cases, physical characteristics equipment familiarization, customer service training and an orientation, introducing them to KCS, Keolis, MBTA and the MBTA Service to start **Moving Further Together**. Our General Manager and our Keolis America Human Resources Manager will devise this orientation training for new workforce and management employees.

We plan to administer two orientation modules of approximately four hours each. The orientation program will be administered to all new employees joining us to work in the MBTA Service and will be held at times and at locations that allow employees to attend without interference with their normal work schedule. This will be accomplished in close coordination with the incumbent, to ensure that training activities do not disrupt the normal operation of the service. The MBTA will be welcome to address the new hires during the orientation, if he or she so wishes.

The first module will focus on ourselves, who we are, what we expect and what the corporate culture of the company will emphasize. This session is planned to be a dialogue with the employees, so that we can learn as much as possible about their objectives, expectations and experience.

In broad outline, this session will address at least the following issues:

- Who is Keolis Commuter Services?
- What resources will KCS bring to this operation and to its employees?
- Who do I work for?
- What is expected of me?
- What is **Think Like a Passenger**?
- How can I be successful in this employment relationship?
- How is this company managed?

The second module will discuss, in detail, the operating agreement, our relationship with the MBTA and how each employee will contribute to the success of that relationship and the operation of the system. The second session will also stress the importance of our two customers – the system's riders and the MBTA – and the operating and customer service standards that we expect to attain.

At the completion of these modules, we expect that every employee will understand the objectives of the MBTA Service, the basic process by which contract services will be provided, our corporate culture, customer service requirements and the customer service program that we will be implementing, how employees individually participate and support the overall process and individual assignments and preparation to properly fulfill the assignment and be accountable for the quality of work performed. These orientation sessions will allow existing employees to remain focused on providing the MBTA Service, while gaining answers to the questions they may have on the transition and the company they will be working for.

Technical and Management Training during Mobilization

During Mobilization, we prefer that the incumbent continue any mandatory ongoing training, such as re-certification, or other planned training, so that we can minimize the impact of our efforts on the

operation. For new employees, we may request that they have access to MBTA locomotives and coaches on weekends, under our close supervision, as well as the incumbent and MBTA managers if they wish to participate. These sessions will be for orientation and familiarization with the MBTA fleet and with their new positions with KCS. We will ensure that this initiative does not in any way impact the provision of the MBTA Service, for example by conducting training outside employees' normal working hours. In addition to the training listed in this Section, we will train all personnel and subcontractor employees who will have a direct role in emergency management, incident management and incident response on the NIMS, ICS and other Homeland Security fundamentals. This will include our General Manager and his key management team, as well as all other staff including subcontractor employees, who will need to be operationally fluent on the Commencement Date in NIMS and able to apply the NIMS framework in an incident until first responders arrive on-scene.

Development of an Annual Training Program Plan

During the first 120 days of Mobilization, pursuant to the requirements for ODRL 3.10-026, the complete KCS Annual Training Program Plan for all our employees in the MBTA Service will be fully developed and submitted to the MBTA for approval, so that it can be ready for implementation after the Commencement Date. Information on all training and certification documentation will be available to MBTA upon request and we will publicize all training schedules on the first day of each month, as well as make 10 percent of the seats in all our training programs available to the MBTA employees, or other contractors approved by the MBTA to attend such sessions.

The Keolis America Human Resources Manager will work with each functional expert on our team during Mobilization, to develop all training programs required by law and any additional programs we have identified as necessary to improve the performance of the MBTA Service. In addition to security and emergency preparedness/response-related training programs described above, the table below summarizes the training courses we will create, who will be required to participate and the date by which they will be submitted to MBTA for review and approval.

Area	Course	Participants	Submission date
HR / Management	New Employee Competency Evaluation and Orientation Training Program	All new employees	60 days after NTP
	Equal Employment Opportunity and Diversity Training	All employees	120 days after NTP
	KRSV Drug-Free Workplace Policy	All employees	120 days after NTP
	Sexual Harassment	All employees	120 days after NTP
	MBTA approved briefing regarding the terms of the Agreement	Management	120 days after NTP
	Refresher class on applicable terms of the Agreement	Management	120 days after NTP
	Supervisor / First Line Management Training	Supervisors / First Line Managers	
	Management training	Engineering, Maintenance, Transportation and Customer Service staff	120 days after NTP
Engineering	Welding	Engineering and Maintenance staff	120 days after NTP
	Railroad Workplace Safety (including Blue Signal, Right to Know, Blood Born Pathogens, Hazardous Materials)	Engineering staff	60 days after NTP
	Bridge Worker Safety	Engineering staff	120 days after NTP
	Roadway Worker Protection	Engineering staff	120 days after NTP
	Track Car Driver	Engineering staff	120 days after NTP
	NORAC Book of Rules (ops & non-ops classes)	Engineering and Maintenance staff	120 days after NTP
	Track inspection	Engineering staff	120 days after NTP
	Signalman qualification	Engineering staff	90 days after NTP
	6 Sigma Black Belt		

Area	Course	Participants	Submission date
Safety	System Safety Plan	Engineering, Maintenance, Transportation and Customer Service staff	120 days after NTP
	Safety-related training	Engineering, Maintenance, Transportation and Customer Service staff	120 days after NTP
	System Security Plan	Engineering, Maintenance, Transportation and Customer Service staff	120 days after NTP
	Emergency preparedness, response & incident management	Engineering, Maintenance, Transportation and Customer Service staff	120 days after NTP
	Accident investigation	Engineering, Maintenance and Transportation staff	120 days after NTP
	OSHA training	Engineering, Maintenance and Transportation staff	120 days after NTP
	Derailment investigation training	Engineering, Maintenance, Transportation and Customer Service staff	120 days after NTP
	Operation Lifesaver	Transportation	120 days after NTP
Maintenance	Qualified Maintenance Person (QMP) qualification	Maintenance	60 days after NTP
	QMP refresher	Maintenance	60 days after NTP
	Refrigerant handling certification	Maintenance	60 days after NTP
	Craft competency	Maintenance	120 days after NTP
	Carman skills & qualification	Maintenance	90 days after NTP
	Machinist skills & qualification	Maintenance	90 days after NTP
	Electrician skills & qualification	Maintenance	90 days after NTP
	Pipefitter/Sheet Metal Worker skills & qualification	Maintenance	90 days after NTP
	HVAC System Troubleshooting and Repair Training Program	Maintenance	120 days after NTP
	Non-revenue QMP Training Program	Maintenance	120 days after NTP
	Locomotive Technician skills & qualification	Maintenance	120 days after NTP
	Coach Technician skills & qualification	Maintenance	120 days after NTP

Figure 12-3: Training Programs

Area	Course	Participants	Submission date
Transportation	NORAC Book of Rules	Transportation	120 days after NTP
	Locomotive Engineer Certification and Re-certification	Transportation	60 days after NTP
	Conductor Certification and Re-certification	Transportation	60 days after NTP
	Assistant Conductor qualification	Transportation	120 days after NTP
	Assistant Chief Dispatcher and Dispatcher qualification	Transportation	120 days after NTP
	Designated Supervisor of Locomotive Engineers qualification	Transportation	120 days after NTP
	Emergency preparedness	Transportation	60 days after NTP
	ADA training	Transportation and Customer Service staff	120 days after NTP
	Internal first responder training, including CPR and AED	All classes of operator personnel	120 days after NTP
Customer Service	Communication, including anger management and conflict resolution	Customer Service and Transportation staff	120 days after NTP
	Customer Service Representative qualification	Customer Service	120 days after NTP
Other	First responder training	Police, fire, & emergency services	60 days after NTP (September 1 every year thereafter)

12.A.4. Transition and Service Continuity Plans

We have identified all of the tasks that will need to be accomplished in preparation for our assumption of Operations and Maintenance activities for the MBTA and prepare and efficient a Mobilization Milestone Schedule. We clearly understand the importance of a safe, seamless transition on July 1, 2014. We are fully committed to having all aspects of the service in place and prepared to the level of competency and operational excellence that the MBTA Service deserves.

From our extensive experience in transitions of this type, it is difficult to predict the level of involvement and cooperation that will be demonstrated by the outgoing contractor. We will approach the current operator in the same manner as we have approached every other transition and, hopefully, will receive the requested level of positive response and cooperation. Should that not be the case, as mentioned above, we may have to look to the MBTA for assistance as circumstances require.

Obviously, it will be important that these above transition efforts - and all of the activities - begin commensurate with receipt of NTP from the MBTA, or in some cases even before. We are ready to fulfill these activities on time and on budget, including but not limited to running parallel systems to ensure full continuity. We will establish a series of peer review committees who have extensive experience with mobilizing similar commuter rail services (including the MBTA's) and whose focus will be the transition elements

to be accomplished within their specific area. The MBTA and our incumbent will be invited to participate on all of these committees. We will have all key managers in place and functioning immediately upon award. We will establish our offices for the Mobilization Team close by the incumbent's. As described earlier, we will establish a telephone helpline and website with email address as well as road shows. This will allow employees to ask us questions and raise concerns they may have and obtain an answer within 24 hours.

The Mobilization Milestone Schedule, shown later in this Plan, provides for the delivery of all plans and fulfillment of all activities required during Mobilization.

12.A.5. Temporary Physical Plant Requirements

We understand that the MBTA Service facilities occupied by the incumbent cannot be assumed until the date of revenue service. Based on our proposed organizational structure and immediately upon receiving NTP we will into temporary leased facilities (6 months) in a central location. The leased facilities will be equipped with Internet access, telephones, board room and interviewing room facilities. We may also use a trailer, if and when needed.

12.A.6. Access Arrangements Required from the MBTA

We have smoothly transitioned similar operations with the incumbent contractor, so there is a continued expectation that if we are successful as the new contractor, this collaboration would continue. While this reciprocity is expected, we would ask the MBTA to formalize some requests such as, without interfering with the incumbent:

- Unrestricted access to operations and maintenance facilities (including equipment for auditing, familiarization and training purposes)
- Comprehensive records transfer
- FRA inspection reports
- Material inventory (with serialized components, date of installation and warranty information), CWR Plan and Joint Maintenance, mechanical records (preventative maintenance history, hours and/or mileage history), facility records
- Engineer certification files (including employee training records and certification dates)
- D&A records
- Test and observation data
- Crossing activation failure reports for the last 12 months
- CFR 234 & CFR 236 reports
- Contact information for all employees of the incumbent and subcontractors (including names, addresses and telephone numbers)
- Capital/operating programs currently underway with progress reports, transition obligations outside the current contract that are agreements in principle between the incumbent contractor and the MBTA
- Coordination of necessary hardware and software configurations required to connect our local network to the MBTA's
- Sets of locomotive, coach and switch keys and control system in place for security locks, i.e. signal bungalows.

12.A.7. Support Required from the MBTA

The presence of the MBTA management will provide continuity of oversight and the best possible information flow and allow the MBTA and us to establish the correct communication procedures with the incumbent. As indicated above, all of our actions under this contract will be orchestrated with the MBTA. We are aware that the current Agreement for the Operation of Commuter Rail Service between the MBTA and the incumbent requires the cooperation of the incumbent in the event of a transition to a new contractor. We assume that that cooperation will be forthcoming to mitigate impacts on the transition process, including but not limited to Section 13 (c) implications. To the extent that this contractually-required cooperation does not materialize, we will ask the MBTA for assistance and support in obtaining that cooperation.

Also needed from the MBTA will be all training manuals or equipment manuals that can be utilized to develop the training classes that are required, coordination of the necessary hardware and software configurations required to connect our local network, and the MBTA network and input when configuring various pieces of software.

12.A.8. Communications and Information Management System Implementation Plans

Communications and Information Management systems should address the incident-related policies, equipment, systems, standards and training necessary to achieve integrated communications among all parties involved. We have addressed this topic in the context of emergency preparedness and response. All other communications and information management systems are addressed in Section 9 – Information Technology Services Plan and in section 12.A.10. of this Plan.

Effective emergency management and incident response activities rely on flexible communications and information systems that provide a common operating picture to emergency management/response personnel and their affiliated organizations. Establishing and maintaining a common operating picture and ensuring accessibility and interoperability are the principal goals of an effective Communications and Information Management system.

Common Operating Picture

- Establishing and maintaining a common operating picture during an incident:
- Improves incident safety
- Provides the basis for informed predictions and proactive response
- Allows effective, consistent, and timely tactical and strategic decisions
- Supports a coordinated response among all response participants
- Helps ensure consistency of messages shared with the agency leaders, the media, the public, all levels of government, and others

Incident communications are facilitated through the development and use of common communications plans and interoperable communications equipment, processes, standards and architectures. During an incident, this integrated approach links the operational and support units of the various organizations to maintain communications connectivity and situational awareness.

Communications Interoperability

Communications interoperability allows emergency management/response personnel and their affiliated organizations to communicate within and across agencies and jurisdictions via voice, data or video in real time, when needed and when authorized.

We will ensure that our communications systems are capable of interoperability, as successful emergency management and incident response operations require the continuous flow of critical information among jurisdictions, disciplines, organizations and agencies.

Interoperability planning requires accounting for emergency management and incident response contingencies and challenges. Interoperability plans should include considerations of governance, standard operating procedures (SOPs), technology, training and exercises and usage within the context of the stress and chaos of a major response effort.

Coordinated Decision Making

Between agencies and jurisdictions is necessary to establish proper and coherent governance and is critical to achieving interoperability. Agreements and SOPs should clearly articulate the processes, procedures and protocols necessary to achieve interoperability.

Technology Support Requirements

Our IT department will work with department heads, local emergency management and state emergency management to determine technology

support requirements. IT managers will reach out to emergency management personnel in the community to formulate information technology requirements. In fact, the need for system readiness applies to wireless radio systems, telephone and video technology, hardware and software for information sharing, networks for online access, web sites, databases, and other online resources, non-technological tools used for information sharing, such as standard report forms.

Incident Management Training, Preparation and Capabilities

NIMS is a national systematic approach to incident management, which includes ICS, multiagency coordination systems and public information. Because emergency management often requires the response and assistance of multiple agencies, practiced coordination is required to carry out the most successful response.

We will use the Federal Emergency Management Agency (FEMA) Emergency Management Institute's (EMI) Independent Study Program to accomplish the bulk of the initial NIMS training and work with the Massachusetts Department of Emergency Management (MEMA) to conduct training and develop and participate in drills and exercises relevant to the commuter rail operation.

In addition to the orientation and familiarization training arranged through Thomas McCarthy and provided by the MBTA Police, our key managers will receive FEMA, NIMS and ICS security/emergency preparedness/response-related training, including but not limited to the following:

- Federal Emergency Management System (FEMA) National Incident Management System (NIMS) IS 700 a: Introduction to the National Incident Management System
- FEMA IS-703.a: NIMS Resource Management
- FEMA IS-704: NIMS Communications and Information Management
- FEMA IS-1: Emergency Manager: An Orientation to the Position
- FEMA IS-100.b: Introduction to Incident Command System, I-100 (ICS 100)
- FEMA IS-100.PWb: Introduction to Incident Command System, I-100 for Public Works Personnel
- FEMA IS-200.b: ICS for Single Resource and Initial Action Incidents
- FEMA IS-201: Forms Used for the Development of the Incident Action Plan
- FEMA IS-208.a: State Disaster Management
- FEMA IS-230.b: Fundamentals of Emergency Management
- FEMA IS-235.b: Emergency Planning
- FEMA IS-546.a: Continuity of Operations (COOP) Awareness Course
- FEMA IS 547.a: Introduction to Continuity of Operations (COOP)
- FEMA IS 548: Continuity of Operations (COOP)
- http://www.tsa.gov/sites/default/files/assets/pdf/ssi/stakeholder_brochure.pdf

This list of training courses to be made available to our key managers is intended to be representative rather than exhaustive and additional courses may be added, both during Mobilization and during the course of actual operation of the MBTA Service.

All personnel and subcontractor employees who will have a direct role in emergency management, incident management and incident response will be trained from the Commencement Date on the NIMS, ICS and other Homeland Security fundamentals. This will include our General Manager and his key management team, as well as all other staff including subcontractor employees, who will need to be operationally fluent in NIMS and able to apply the NIMS framework in an incident until first responders arrive on-scene. Training will include:

- Set up initial and refresher training, as well as testing of on-board personnel (train and engine crews)

- Training for OCC personnel on appropriate courses of action for potential emergency situations (NIMS, ICS)
- Familiarization with the train dispatching territories within the MBTA Service
- Protocols governing internal communications between appropriate control center personnel whenever an imminent potential emergency situation exists
- Emergency notification procedures — both internal and external

Incident Notification/Communications

Properly planned, established and applied communications enable the dissemination of information among command and support elements and, as appropriate, cooperating agencies and organizations.

Incident communications are facilitated through the development and use of common communications plans and interoperable communications equipment, processes, standards and architectures. During an incident, this integrated approach links the operational and support units of the various organizations to maintain communications connectivity and situational awareness.

We will ensure that our accident investigation policies and procedures are in conformance with APTA Standard RT-S-OP-002-02 (2004), July 2005. This provides a common framework for rail systems to develop accident/incident investigation plans. We will include the following topics in our plans:

- Policies and procedures
- Investigation thresholds
- Notification
- Coordination with government or regulatory agencies
- Investigation process
- Training
- Analysis
- Post-accident reporting
- Follow-up activities

In the event of an incident, we will immediately inform the appropriate MBTA-designated representatives, pursuant to contractual requirements and MBTA's direction, and will respond to the incident as effectively as possible. We will prepare and submit all statutorily and contractually-required reporting subsequent to the incident.

We will develop and implement accident/incident internal and external notification procedures, including the following:

- *Operations Control Center (OCC).* All loss-causing accidents/incidents involving our personnel or agency property will be reported to the appropriate OCC, in this case CROCC and/or CETC, in accordance with the governing regulations, rules and procedures.
- *Management, Supervisory and Emergency Response.* We will notify appropriate management, supervisory and emergency response personnel in accordance with notification protocols developed in full compliance with the contract. Internal notifications will be made as soon as practicable.

An interim written incident report will be transmitted to MBTA within twenty-four hours of the incident. A full investigative report, complete with root cause and corrective actions (if applicable), will be submitted to MBTA within thirty days of the incident.

Contacts

During Mobilization we will develop an extensive contact list of both internal and external parties involved will facilitate the effective dissemination of information among command and support elements and, as appropriate, cooperating agencies and organizations. Internal contacts include management, supervisory and emergency response personnel, including CROCC and/or CETC, environmental contractor(s), and MBTA police. External contacts include:

- Joint Operations - Amtrak, CSX, Pan Am Railways: Meetings with other railroads hosting passenger trains service will help to

address the specific responsibilities of each railway and any relevant concerns.

- Emergency Responders: Emergency Responders play a critical role in emergency preparedness and overall safety. Creating an established liaison with external Emergency Responders will facilitate communication and improve safety outcomes.

On-Board Emergency Equipment

We will determine the types and location of all on-board emergency equipment as well as their inspection and maintenance procedures to ensure equipment is in proper working order at all times.

Passenger Safety Information and Passenger Education / Awareness

Keeping passengers informed of proper safety and emergency procedures is crucial. We will set up meetings with MBTA to coordinate passenger education and awareness programs regarding emergency procedures and emergency evacuation routes.

12.A.9. Schedule for Delivery of All Plans and Fulfillment of All Activities Required During the Mobilization Period

We will focus on accomplishing the following mobilization tasks in the most comprehensive and efficient manner possible. Every service transition presents new and unique challenges, but the issues that must be resolved are generally similar to the list of tasks and timeline set forth below. We will begin the process using this framework, and make adjustments as needed, based on consultation with the MBTA and the specific challenges presented by the transition process. This timeline truly becomes a living document as it expands and develops during Mobilization.

Schedule of Critical Activities

The Mobilization Milestone Schedule is first and foremost to be used for communication and coordination. Serving as the road map for the mobilization team, the plan will also identify project needs and commitments, and communicate intent, accomplishments and problems to the MBTA.

Some of the key components of this Ppng the mestone Schedulethe workforce and the management records. ng it up to a state of good repairorlan are weekly meetings with the MBTA and the incumbent as needed, regular progress reports to the MBTA, employee hiring plans, transition and service continuity plans, production of requested policies and procedures documentation, set up of payroll and other management systems and safety documentation.

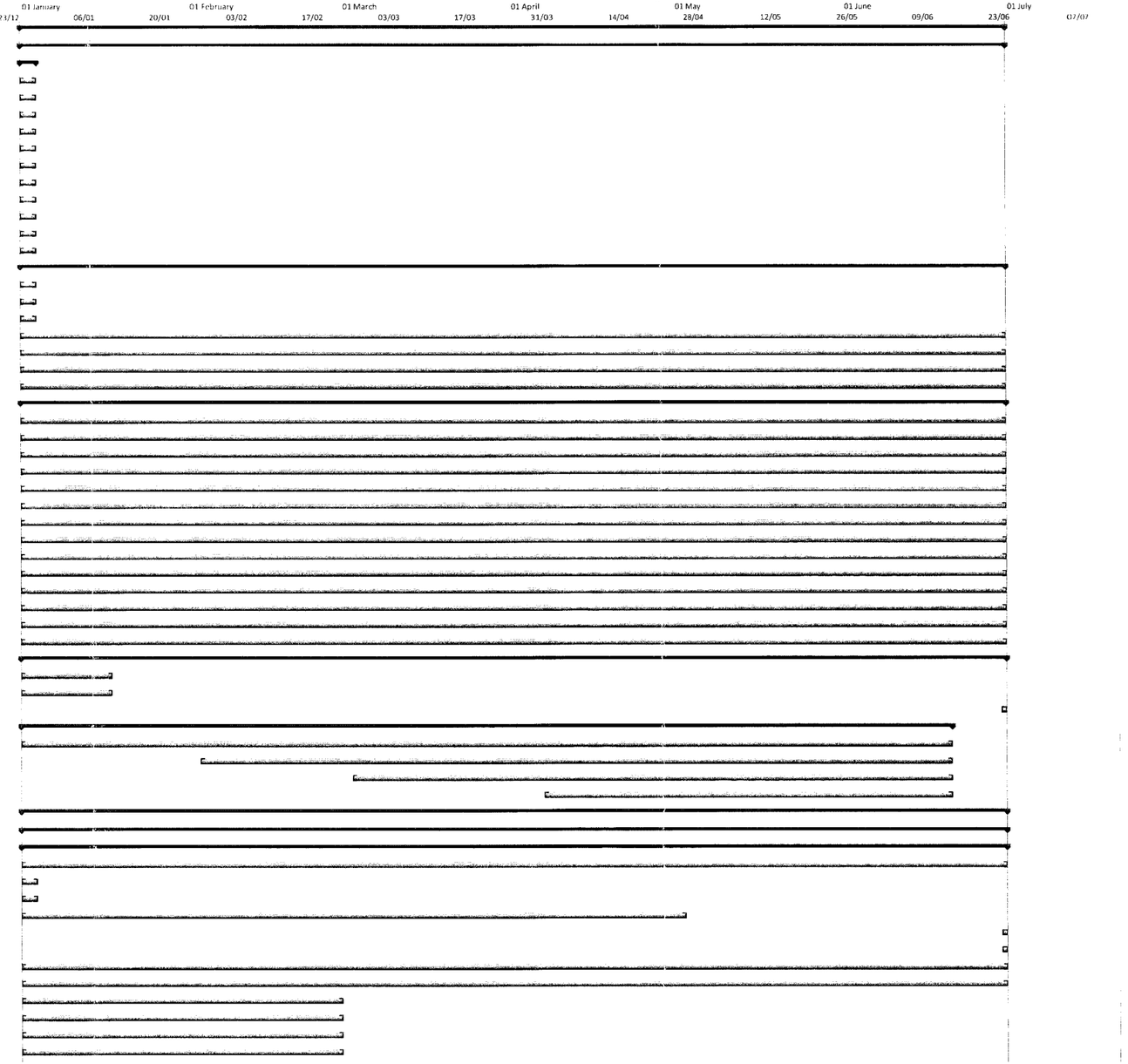
Critical Path

The critical path defines the schedule for the project. This Mobilization Milestone Schedule is built around several critical paths which are the following:

- Mobilization Management
- Personnel Recruitment/Training
- Administration/Finance Readiness
- Materials Management Readiness
- Information Technology Readiness
- Quality Assurance Readiness
- Transportation Service Readiness (Customer Service Readiness)
- Mechanical Service Readiness
- Engineering Service Readiness
- Environmental Readiness
- Safety/Regulatory/Security Readiness

The Mobilization Milestone Schedule provides the outline and roadmap of the significant activities required prior to our assumption of operating and maintenance responsibilities including but not limited to all plans, procedures and submittals (ODRL's).

ID	Task Name	Duration	Start	Finish
1	**Integration Team Support/Admin**	**129 days**	**Wed 01/01/14**	**Mon 30/06/14**
2	**B.1./B.2. Mobilization Management**	**129 days**	**Wed 01/01/14**	**Mon 30/06/14**
3	*ODRL's*	**3 days**	**Wed 01/01/14**	**Fri 03/01/14**
4	Mobilization Plan (3.12-001)	3 days	Wed 01/01/14	Fri 03/01/14
5	Mobilization Organization (3.12-002)	3 days	Wed 01/01/14	Fri 03/01/14
6	Third Party Mobilization Services List (3.12-003)	3 days	Wed 01/01/14	Fri 03/01/14
7	MBCR Transition Services List (3.12-004)	3 days	Wed 01/01/14	Fri 03/01/14
8	Fra/Regulatory Agency Deliverable Spreadsheet (3.12-005)	3 days	Wed 01/01/14	Fri 03/01/14
9	Mobilization Milestone Schedule (3.12-006)	3 days	Wed 01/01/14	Fri 03/01/14
10	Mobilization Plan Underlying Assumptions (3.12-007)	3 days	Wed 01/01/14	Fri 03/01/14
11	Mobilization Overlaps & Mitigation (3.12-008)	3 days	Wed 01/01/14	Fri 03/01/14
12	Mobilization Status Meeting Schedule (3.12-009)	3 days	Wed 01/01/14	Fri 03/01/14
13	Document & Template Spreadsheet (3.12-010)	3 days	Wed 01/01/14	Fri 03/01/14
14	Safety Sensitive Subcontractors Positions (3.12-011)	3 days	Wed 01/01/14	Fri 03/01/14
15	*General*	**129 days**	**Wed 01/01/14**	**Mon 30/06/14**
16	Notice To Proceed (NTP)	3 days	Wed 01/01/14	Fri 03/01/14
17	Notice To Commence Service (NTCS)	3 days	Wed 01/01/14	Fri 03/01/14
18	Mobilization Kick Off Meeting	3 days	Wed 01/01/14	Fri 03/01/14
19	Negotiate And Maintain Mobilization Budget	129 days	Wed 01/01/14	Mon 30/06/14
20	Weekly Meetings With The MBTA	129 days	Wed 01/01/14	Mon 30/06/14
21	Weekly Meetings With MBCR	129 days	Wed 01/01/14	Mon 30/06/14
22	Monthly Internal Steering Meeting	129 days	Wed 01/01/14	Mon 30/06/14
23	*Staffing*	**129 days**	**Wed 01/01/14**	**Mon 30/06/14**
24	General Manager	129 days	Wed 01/01/14	Mon 30/06/14
25	Deputy General Manager	129 days	Wed 01/01/14	Mon 30/06/14
26	Chief Transportation Officer	129 days	Wed 01/01/14	Mon 30/06/14
27	Chief Mechanical Officer	129 days	Wed 01/01/14	Mon 30/06/14
28	Chief Engineer	129 days	Wed 01/01/14	Mon 30/06/14
29	Director - Finance, Accounting And Administration	129 days	Wed 01/01/14	Mon 30/06/14
30	Director - Customer Service	129 days	Wed 01/01/14	Mon 30/06/14
31	Director – Safety, Security, Emergency Preparedness And Regulatory Compliance	129 days	Wed 01/01/14	Mon 30/06/14
32	Director - Quality And Environmental Services	129 days	Wed 01/01/14	Mon 30/06/14
33	Director – Human Resources & Training	129 days	Wed 01/01/14	Mon 30/06/14
34	Director – Equal Opportunity & Diversity	129 days	Wed 01/01/14	Mon 30/06/14
35	Chief Information Officer	129 days	Wed 01/01/14	Mon 30/06/14
36	General Counsel & Labor Affairs	129 days	Wed 01/01/14	Mon 30/06/14
37	All Other Mobilization Team Staffing	129 days	Wed 01/01/14	Mon 30/06/14
38	*Mobilization Office Infrastructure/Setup*	**129 days**	**Wed 01/01/14**	**Mon 30/06/14**
39	Prepare/Set Up Mobilization Facilities	13 days	Wed 01/01/14	Fri 17/01/14
40	Arrange Additional Temporary Office Space As Needed	13 days	Wed 01/01/14	Fri 17/01/14
41	Move Into Permanent Facilities	1 day	Mon 30/06/14	Mon 30/06/14
42	*Joint Audit*	**123 days**	**Wed 01/01/14**	**Fri 20/06/14**
43	Perform Joint Audit	123 days	Wed 01/01/14	Fri 20/06/14
44	Discuss Joint Audit Results	100 days	Mon 03/02/14	Fri 20/06/14
45	Develop Recommendations For The MBTA	80 days	Mon 03/03/14	Fri 20/06/14
46	Implement Approved Improvements	55 days	Mon 07/04/14	Fri 20/06/14
47	**C. Service Readiness**	**129 days**	**Wed 01/01/14**	**Mon 30/06/14**
48	**C.1. Personnel Recruitment/Training**	**129 days**	**Wed 01/01/14**	**Mon 30/06/14**
49	*ODRL's*	**129 days**	**Wed 01/01/14**	**Mon 30/06/14**
50	Finalize The Organization Chart (3.9-003)	129 days	Wed 01/01/14	Mon 30/06/14
51	Written Union Notification Of The Selection (3.9-018)	3 days	Wed 01/01/14	Fri 03/01/14
52	Labor Terms & Pledge To Comply (3.9-019)	3 days	Wed 01/01/14	Fri 03/01/14
53	Baseline Competency Test Plan (3.9-015)	88 days	Wed 01/01/14	Fri 02/05/14
54	List Of OGM Designees (3.9-001)	1 day	Mon 30/06/14	Mon 30/06/14
55	List Of ODGM Designees (3.9-004)	1 day	Mon 30/06/14	Mon 30/06/14
56	Hiring Progress Report Weekly During Mobilization (3.9-016)	129 days	Wed 01/01/14	Mon 30/06/14
57	Non-MBCR Workforce Hiring Explanations Weekly During Mobilization (3.9-017)	129 days	Wed 01/01/14	Mon 30/06/14
58	Locomotive Engineer Certification (3.10-007)	43 days	Wed 01/01/14	Fri 28/02/14
59	Conductor Certification (3.10-008)	43 days	Wed 01/01/14	Fri 28/02/14
60	QMP Training Program (3.10-009)	43 days	Wed 01/01/14	Fri 28/02/14
61	QMP Refresher Training Program (3.10-010)	43 days	Wed 01/01/14	Fri 28/02/14

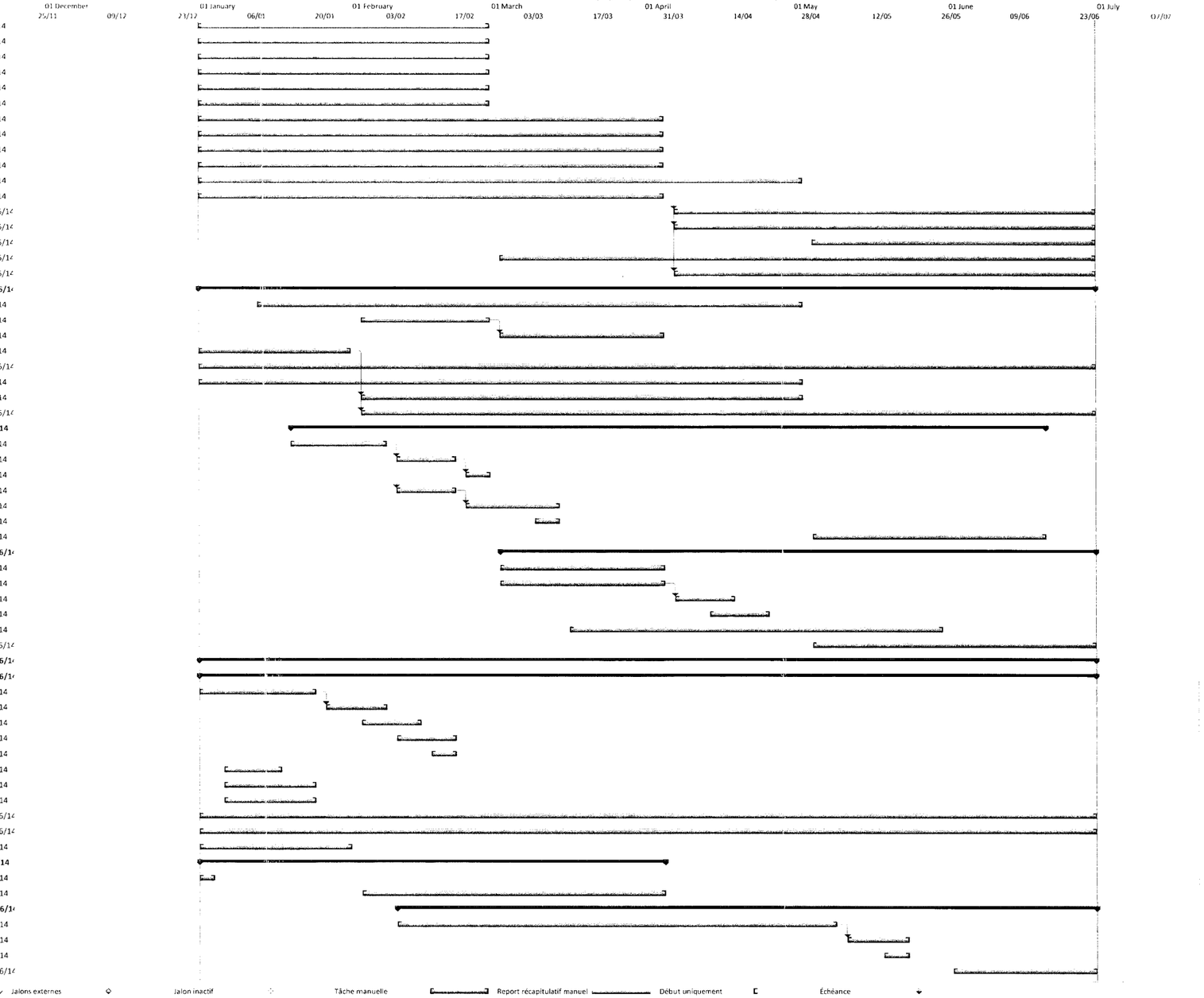


Projet : Boston Mob5
Date : Mon 05/08/13

Tâche · Fractionnement · Jalon · Récapitulative · Récapitulatif du projet · Tâches externes · Jalons externes · Tâche inactive · Jalon inactif · Récapitulatif inactif · Tâche manuelle · Durée uniquement · Report récapitulatif manuel · Récapitulatif manuel · Début uniquement · Fin uniquement · Echéance · Avancement

Page 1

ID	Task Name	Duration	Start	Finish
62	Railroad Workplace Safety Programs (3.10-011)	43 days	Wed 01/01/14	Fri 28/02/14
63	Emergency Preparedness Program (3.10-012)	43 days	Wed 01/01/14	Fri 28/02/14
64	Refrigerant Handling Training Program (3.10-013)	43 days	Wed 01/01/14	Fri 28/02/14
65	New Employee Competency Evaluation And Orientation Training Program (3.10-018)	43 days	Wed 01/01/14	Fri 28/02/14
66	O&M Agreement Training Complete (3.10-023)	43 days	Wed 01/01/14	Fri 28/02/14
67	First Responder Training Program (3.10-005)	43 days	Wed 01/01/14	Fri 28/02/14
68	Carman Training Program (3.10-014)	68 days	Wed 01/01/14	Fri 04/04/14
69	Signalman Training Program (3.10-015)	68 days	Wed 01/01/14	Fri 04/04/14
70	Machinist/Electrician/Pipefitter/Sheet Metal Worker Training & Qualification Program (3.10-016)	68 days	Wed 01/01/14	Fri 04/04/14
71	Standardized Qualification Test And Practical Examination Materials (3.10-017)	68 days	Wed 01/01/14	Fri 04/04/14
72	Initial Training Plan (3.10-026)	88 days	Wed 01/01/14	Fri 02/05/14
73	Non-Revenue QMP Training Program (3.10-028)	68 days	Wed 01/01/14	Fri 04/04/14
74	New Fleet OEM Technical Assistance (3.10-021)	61 days	Mon 07/04/14	Mon 30/06/14
75	Shop Equipment OEM Technical Assistance (3.10-022)	61 days	Mon 07/04/14	Mon 30/06/14
76	Monthly Training Report (3.10-003)	41 days	Mon 05/05/14	Mon 30/06/14
77	Operator Book Of Rules & Related Materials (3.10-004)	86 days	Mon 03/03/14	Mon 30/06/14
78	Annual Training Plan Review Meeting (3.10-025)	61 days	Mon 07/04/14	Mon 30/06/14
79	*General*	**129 days**	**Wed 01/01/14**	**Mon 30/06/14**
80	Negotiate And Finalize Union Agreements (CBA's)	80 days	Mon 13/01/14	Fri 02/05/14
81	Establish The Posting/Bidding Process	20 days	Mon 03/02/14	Fri 28/02/14
82	Establish Mechanism For Handling Labor Time Claims	25 days	Mon 03/03/14	Fri 04/04/14
83	Implement Employer Communication Tools/Feedback Mechanisms	23 days	Wed 01/01/14	Fri 31/01/14
84	Develop & Implement Various Training Programs/Train Key Managers (NIMS, ICS 100, Etc.)	129 days	Wed 01/01/14	Mon 30/06/14
85	Develop An Affirmative Action Plan	88 days	Wed 01/01/14	Fri 02/05/14
86	Develop A Joint Business Guide	65 days	Mon 03/02/14	Fri 02/05/14
87	Develop Security Training Programs & Train Key Managers (NIMS, ICS, Etc.)	106 days	Mon 03/02/14	Mon 30/06/14
88	*Management*	**110 days**	**Mon 20/01/14**	**Fri 20/06/14**
89	Management Interview	15 days	Mon 20/01/14	Fri 07/02/14
90	Management Assessment	10 days	Mon 10/02/14	Fri 21/02/14
91	Selection Of Management With The MBTA	5 days	Mon 24/02/14	Fri 28/02/14
92	Offers Of Employment	10 days	Mon 10/02/14	Fri 21/02/14
93	Other Management Recruitment If Necessary	15 days	Mon 24/02/14	Fri 14/03/14
94	D&A Testing, Background Checks And Physicals	5 days	Mon 10/03/14	Fri 14/03/14
95	Orientation Sessions	35 days	Mon 05/05/14	Fri 20/06/14
96	*Other Personnel*	**86 days**	**Mon 03/03/14**	**Mon 30/06/14**
97	Union Personnel Interview	25 days	Mon 03/03/14	Fri 04/04/14
98	Assess Seniority/Eligibility Rules For Impact On Composition Of Other Personnel	25 days	Mon 03/03/14	Fri 04/04/14
99	Offers Of Employment	10 days	Mon 07/04/14	Fri 18/04/14
100	Union Personnel Recruitment If Necessary	10 days	Mon 14/04/14	Fri 25/04/14
101	D&A Testing, Background Checks And Physicals	55 days	Mon 17/03/14	Fri 30/05/14
102	Orientation Sessions	41 days	Mon 05/05/14	Mon 30/06/14
103	**C.2. Administration/Finance Readiness**	**129 days**	**Wed 01/01/14**	**Mon 30/06/14**
104	*General*	**129 days**	**Wed 01/01/14**	**Mon 30/06/14**
105	Conduct Critical Review	18 days	Wed 01/01/14	Fri 24/01/14
106	Determine Critical Action Steps	10 days	Mon 27/01/14	Fri 07/02/14
107	Design Account Structure	10 days	Mon 03/02/14	Fri 14/02/14
108	Install & Format Financial Mgmt Mis System	10 days	Mon 10/02/14	Fri 21/02/14
109	Load Account Structures	5 days	Mon 17/02/14	Fri 21/02/14
110	Open Master Bank Account	10 days	Mon 06/01/14	Fri 17/01/14
111	Develop Financing	15 days	Mon 06/01/14	Fri 24/01/14
112	Place Bonds	15 days	Mon 06/01/14	Fri 24/01/14
113	Review, Assess, Negotiate & Finalize All Agreements With Subcontractors	129 days	Wed 01/01/14	Mon 30/06/14
114	Negotiate & Finalize All Necessary Permits And Licenses	129 days	Wed 01/01/14	Mon 30/06/14
115	Develop Protocol For The Transfer Of MBTA/Incumbent Owned Property	23 days	Wed 01/01/14	Fri 31/01/14
116	*Insurances*	**68 days**	**Wed 01/01/14**	**Fri 04/04/14**
117	Obtain The Necessary Insurance Coverage For Mobilization	3 days	Wed 01/01/14	Fri 03/01/14
118	Obtain The Necessary Insurance Coverage For Commencement Date	45 days	Mon 03/02/14	Fri 04/04/14
119	*Payroll*	**101 days**	**Mon 10/02/14**	**Mon 30/06/14**
120	Establish Personnel List	65 days	Mon 10/02/14	Fri 09/05/14
121	Load Payroll Data Into Payroll System	10 days	Mon 12/05/14	Fri 23/05/14
122	Run Payroll Tests	5 days	Mon 19/05/14	Fri 23/05/14
123	Parallel Run With Existing System	21 days	Mon 02/06/14	Mon 30/06/14

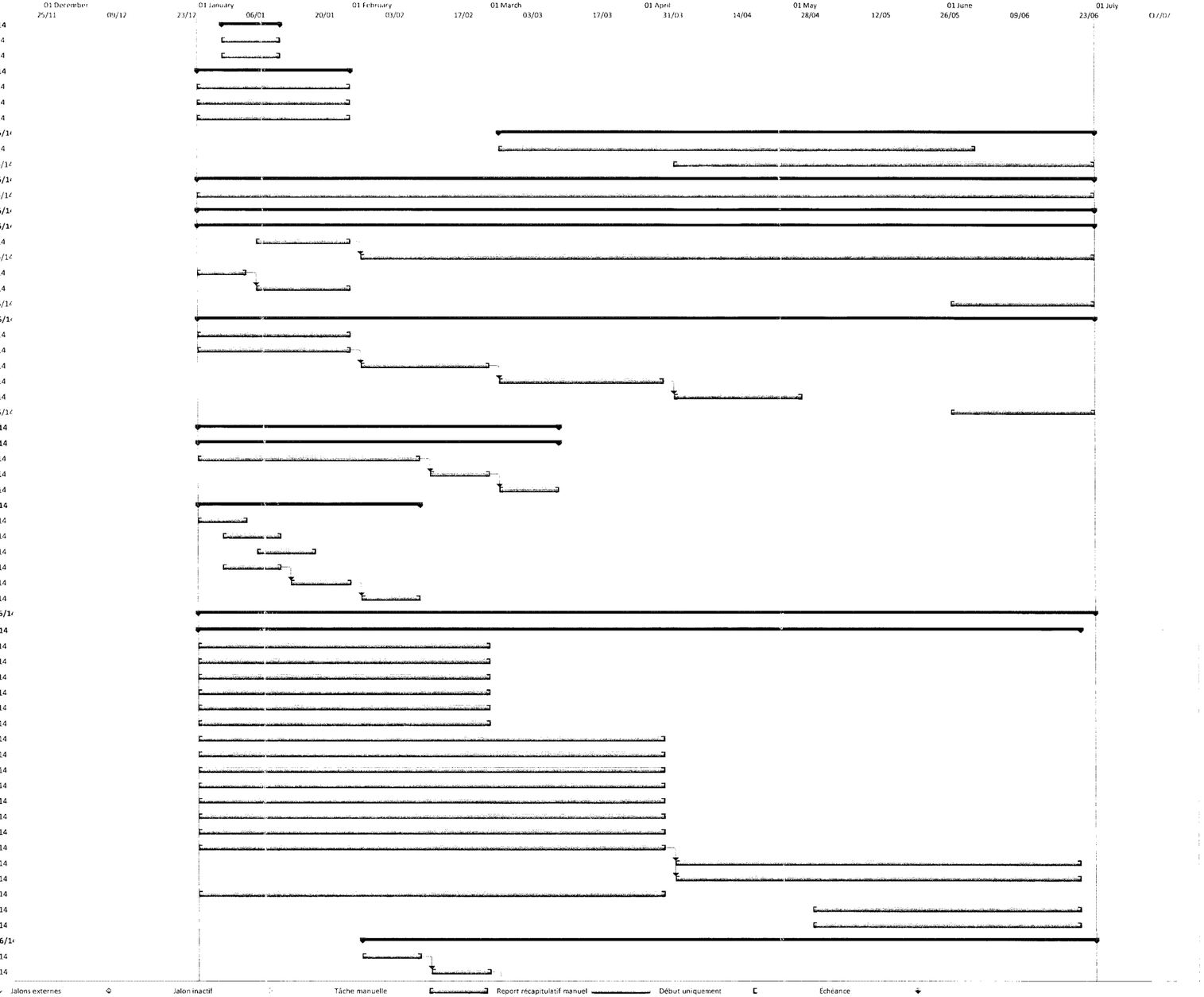


Projet : Boston Mob5
Date : Mon 05/08/13

Tâche · Fractionnement · Recapitulative · Jalon · Tâches externes · Récapitulatif du projet · Jalons externes · Tâche inactive · Jalon inactif · Récapitulatif inactif · Tâche manuelle · Durée uniquement · Report récapitulatif manuel · Récapitulatif manuel · Début uniquement · Fin uniquement · Échéance · Avancement

Page 2

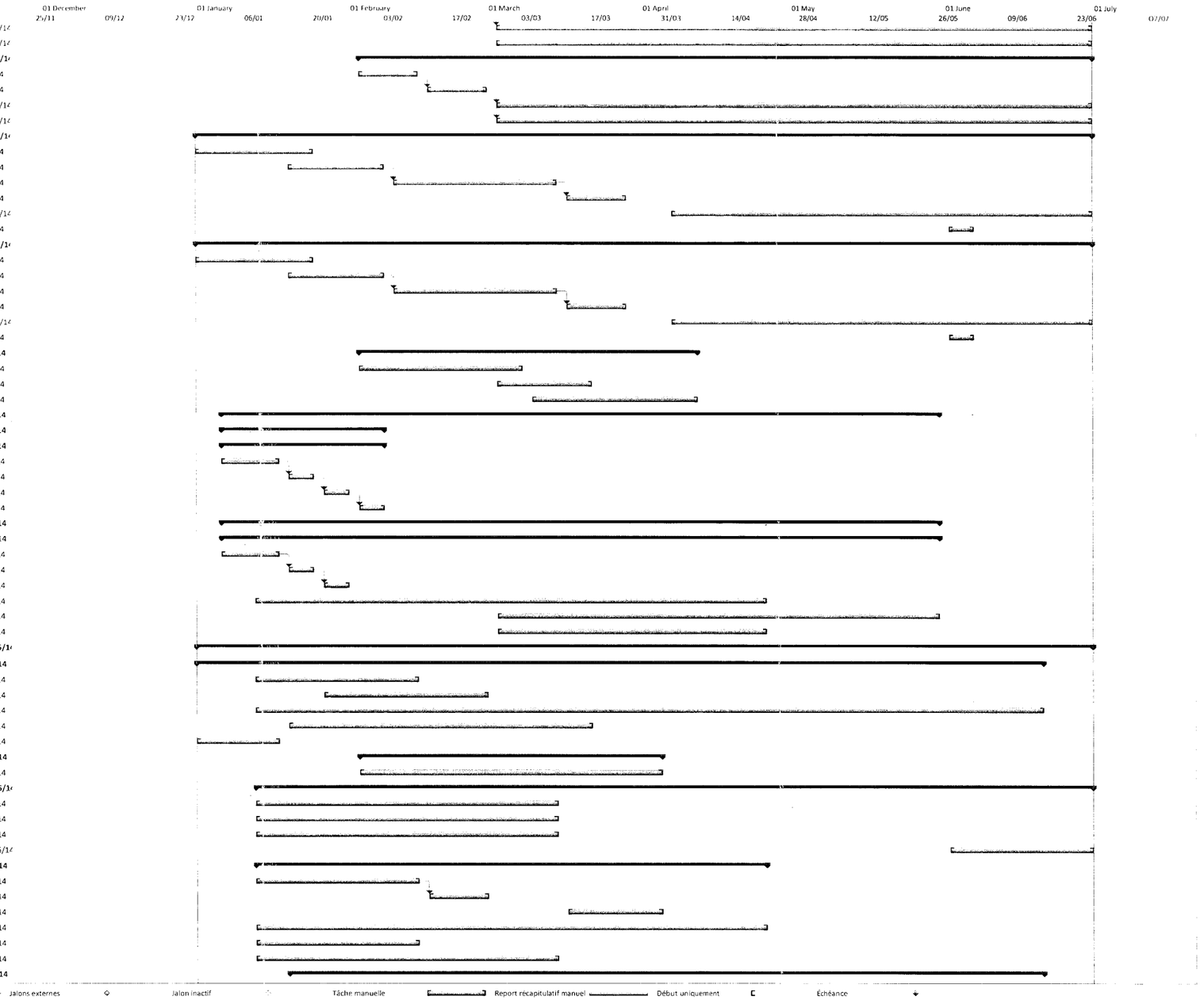
ID	Task Name	Duration	Start	Finish
124	*Disbursements*	**10 days**	**Mon 06/01/14**	**Fri 17/01/14**
125	Design & Implement Banking Structure	10 days	Mon 06/01/14	Fri 17/01/14
126	Develop Corporate Disbursement Procedure	10 days	Mon 06/01/14	Fri 17/01/14
127	*Receipts*	**23 days**	**Wed 01/01/14**	**Fri 31/01/14**
128	Review MBTA Requirements	23 days	Wed 01/01/14	Fri 31/01/14
129	Review Existing Handling & Accounting Procedures	23 days	Wed 01/01/14	Fri 31/01/14
130	Design & Text Record Keeping & Coll. Procedures	23 days	Wed 01/01/14	Fri 31/01/14
131	*Budgeting*	**86 days**	**Mon 03/03/14**	**Mon 30/06/1**
132	Develop Detailed Budget For Y1	70 days	Mon 03/03/14	Fri 06/06/14
133	Develop Budgeting Process For Y1	61 days	Mon 07/04/14	Mon 30/06/1
134	*Policies And Procedures*	**129 days**	**Wed 01/01/14**	**Mon 30/06/1**
135	Review And Develop Policies And Procedures	129 days	Wed 01/01/14	Mon 30/06/1
136	*Reporting*	**129 days**	**Wed 01/01/14**	**Mon 30/06/1**
137	Financial Reporting	**129 days**	**Wed 01/01/14**	**Mon 30/06/1**
138	Design & Implement Reporting System	15 days	Mon 13/01/14	Fri 31/01/14
139	Monthly Report & Reconciliations	106 days	Mon 03/02/14	Mon 30/06/1
140	Review Reporting Requirements	8 days	Wed 01/01/14	Fri 10/01/14
141	Develop Processes	15 days	Mon 13/01/14	Fri 31/01/14
142	Confirm Readiness To Operate System	21 days	Mon 02/06/14	Mon 30/06/1
143	Admin Reporting	**129 days**	**Wed 01/01/14**	**Mon 30/06/1**
144	Review All Contractual Requirements	23 days	Wed 01/01/14	Fri 31/01/14
145	Review With MBTA All Current Reports	23 days	Wed 01/01/14	Fri 31/01/14
146	Review New Reporting Procedures	20 days	Mon 03/02/14	Fri 28/02/14
147	Develop New Report Formats For Approval	25 days	Mon 03/03/14	Fri 04/04/14
148	Finalize New Reporting System	20 days	Mon 07/04/14	Fri 02/05/14
149	Confirm Readiness To Operate System	21 days	Mon 02/06/14	Mon 30/06/1
150	*Other*	**53 days**	**Wed 01/01/14**	**Fri 14/03/14**
151	Office Supplies And Furnishings	**53 days**	**Wed 01/01/14**	**Fri 14/03/14**
152	Conduct Needs Analysis	33 days	Wed 01/01/14	Fri 14/02/14
153	Receive MBTA Approval For Recommended Purchases	10 days	Mon 17/02/14	Fri 28/02/14
154	Order Approved Supplies And Furnishings	10 days	Mon 03/03/14	Fri 14/03/14
155	Telephone And Communication	**33 days**	**Wed 01/01/14**	**Fri 14/02/14**
156	Conduct Critical Short-Term Needs Analysis	8 days	Wed 01/01/14	Fri 10/01/14
157	Receive MBTA Approval For Recommended Purchases	10 days	Mon 06/01/14	Fri 17/01/14
158	Order Approved Equipment	10 days	Mon 13/01/14	Fri 24/01/14
159	Conduct Long-Terms Needs Analysis	10 days	Mon 06/01/14	Fri 17/01/14
160	Receive MBTA Approval For Recommended Purchases	10 days	Mon 20/01/14	Fri 31/01/14
161	Order Approved Equipment	10 days	Mon 03/02/14	Fri 14/02/14
162	**C.3. Materials Management Readiness (Procurement/Purchasing)**	**129 days**	**Wed 01/01/14**	**Mon 30/06/1**
163	*ODRL's*	**128 days**	**Wed 01/01/14**	**Fri 27/06/14**
164	Materials Management Plan (3.4-001)	43 days	Wed 01/01/14	Fri 28/02/14
165	Scrap & Obsolete Material Handling (3.4-010)	43 days	Wed 01/01/14	Fri 28/02/14
166	Inventory Maintenance Plan (3.4-013)	43 days	Wed 01/01/14	Fri 28/02/14
167	None On Hand Material Action List (3.4-014)	43 days	Wed 01/01/14	Fri 28/02/14
168	None On Hand Material Meeting Plan (3.4-015)	43 days	Wed 01/01/14	Fri 28/02/14
169	Fuel Accounting Plan (3.4-022)	43 days	Wed 01/01/14	Fri 28/02/14
170	Critical Material List (3.4-002)	68 days	Wed 01/01/14	Fri 04/04/14
171	New Fleet Parts Lists (3.4-005)	68 days	Wed 01/01/14	Fri 04/04/14
172	Materials Mis Operational & Current (3.4-019)	68 days	Wed 01/01/14	Fri 04/04/14
173	MBTA Materials Management Data Upload (3.4-020)	68 days	Wed 01/01/14	Fri 04/04/14
174	Fuel Test Plan (3.4-021)	68 days	Wed 01/01/14	Fri 04/04/14
175	Locomotive Idle Time Minimization Plan (3.4-030)	68 days	Wed 01/01/14	Fri 04/04/14
176	Warranty Control & Administration Plan (3.4-033)	68 days	Wed 01/01/14	Fri 04/04/14
177	Waste Recycling Tracking Plan (3.4-034)	68 days	Wed 01/01/14	Fri 04/04/14
178	New Fleets Parts & Materials Plan (3.4-004)	60 days	Mon 07/04/14	Fri 27/06/14
179	Obsolete, Surplus & Scrap Material Sales Escrow Account Report (3.4-011)	60 days	Mon 07/04/14	Fri 27/06/14
180	Unique Parts/Safety Stock Lists (3.4-006)	68 days	Wed 01/01/14	Fri 04/04/14
181	Repair-And-Return List (3.4-007)	40 days	Mon 05/05/14	Fri 27/06/14
182	Kitting Plan (3.4-003)	40 days	Mon 05/05/14	Fri 27/06/14
183	*General*	**106 days**	**Mon 03/02/14**	**Mon 30/06/1**
184	Review And Establish Vendor List	10 days	Mon 03/02/14	Fri 14/02/14
185	Load Vendor Data In Financial System	10 days	Mon 17/02/14	Fri 28/02/14



Projet : Boston Mob5
Date : Mon 05/08/13

Tâche · Fractionnement · Jalon · Récapitulative · Récapitulatif du projet · Tâches externes · Jalons externes · Tâche inactive · Jalon inactif · Récapitulatif inactif · Tâche manuelle · Durée uniquement · Report récapitulatif manuel · Récapitulatif manuel · Début uniquement · Fin uniquement · Echéance · Avancement

ID	Task Name	Duration	Start	Finish
186	Maintain Vendor List	86 days	Mon 03/03/14	Mon 30/06/14
187	Develop Purchasing Policies & Procedures	86 days	Mon 03/03/14	Mon 30/06/14
188	*Fixed Assets*	**106 days**	**Mon 03/02/14**	**Mon 30/06/14**
189	Establish Fixed Assets Register With All Details	10 days	Mon 03/02/14	Fri 14/02/14
190	Load Fixed Assets Register In Software	10 days	Mon 17/02/14	Fri 28/02/14
191	Maintain Fixed Assets Register	86 days	Mon 03/03/14	Mon 30/06/14
192	Develop Fixed Assets Procedures	86 days	Mon 03/03/14	Mon 30/06/14
193	*Safety - Procurement*	**129 days**	**Wed 01/01/14**	**Mon 30/06/14**
194	Review & Analyze Policies & Procedures	18 days	Wed 01/01/14	Fri 24/01/14
195	Incorporate Own Policies & Procedures	15 days	Mon 20/01/14	Fri 07/02/14
196	Develop Draft Program	25 days	Mon 10/02/14	Fri 14/03/14
197	Review With The MBTA	10 days	Mon 17/03/14	Fri 28/03/14
198	Revise & Finalize Plan	61 days	Mon 07/04/14	Mon 30/06/14
199	Program Ready For Implementation	5 days	Mon 02/06/14	Fri 06/06/14
200	*Safety - Data Management*	**129 days**	**Wed 01/01/14**	**Mon 30/06/14**
201	Review & Analyze Policies & Procedures	18 days	Wed 01/01/14	Fri 24/01/14
202	Incorporate Own Policies & Procedures	15 days	Mon 20/01/14	Fri 07/02/14
203	Develop Draft Program	25 days	Mon 10/02/14	Fri 14/03/14
204	Review With The MBTA	10 days	Mon 17/03/14	Fri 28/03/14
205	Revise & Finalize Plan	61 days	Mon 07/04/14	Mon 30/06/14
206	Program Ready For Implementation	5 days	Mon 02/06/14	Fri 06/06/14
207	*Warranty*	**50 days**	**Mon 03/02/14**	**Fri 11/04/14**
208	Review All Existing Warranties	25 days	Mon 03/02/14	Fri 07/03/14
209	Review Warranty Enforcement Procedures	15 days	Mon 03/03/14	Fri 21/03/14
210	Develop And Implement Warranty Management Procedures	25 days	Mon 10/03/14	Fri 11/04/14
211	*Joint Audit*	**105 days**	**Mon 06/01/14**	**Fri 30/05/14**
212	Support Property	**25 days**	**Mon 06/01/14**	**Fri 07/02/14**
213	*Work Equipment - Rail & Non-Rail*	**25 days**	**Mon 06/01/14**	**Fri 07/02/14**
214	Review Of Critical Issues	10 days	Mon 06/01/14	Fri 17/01/14
215	Develop Critical Items List	5 days	Mon 20/01/14	Fri 24/01/14
216	Review Critical Items with the MBTA	5 days	Mon 27/01/14	Fri 31/01/14
217	Execute Priority Procurements	5 days	Mon 03/02/14	Fri 07/02/14
218	Service Property	**105 days**	**Mon 06/01/14**	**Fri 30/05/14**
219	*Parts/Materials Other*	**105 days**	**Mon 06/01/14**	**Fri 30/05/14**
220	Review Of Critical Issues	10 days	Mon 06/01/14	Fri 17/01/14
221	Develop Critical Items List	5 days	Mon 20/01/14	Fri 24/01/14
222	Review Critical Items with the MBTA	5 days	Mon 27/01/14	Fri 31/01/14
223	Conduct Joint Audit with the MBTA	75 days	Mon 13/01/14	Fri 25/04/14
224	Develop Inventory Maintenance Plan	65 days	Mon 03/03/14	Fri 30/05/14
225	Execute Priority Procurements	40 days	Mon 03/03/14	Fri 25/04/14
226	**C.4. Information Technology Readiness**	**129 days**	**Wed 01/01/14**	**Mon 30/06/14**
227	*General*	**123 days**	**Wed 01/01/14**	**Fri 20/06/14**
228	Review Existing Policies & Procedures	25 days	Mon 13/01/14	Fri 14/02/14
229	Incorporate Own Policies & Procedures	25 days	Mon 27/01/14	Fri 28/02/14
230	Review With The MBTA	115 days	Mon 13/01/14	Fri 20/06/14
231	Develop & Establish It Training Plans	45 days	Mon 20/01/14	Fri 21/03/14
232	Training	13 days	Wed 01/01/14	Fri 17/01/14
233	*Staffing*	**45 days**	**Mon 03/02/14**	**Fri 04/04/14**
234	Review & Finalize Assignments	45 days	Mon 03/02/14	Fri 04/04/14
235	Knowledge Management	**121 days**	**Mon 13/01/14**	**Mon 30/06/14**
236	Establish Intranet	45 days	Mon 13/01/14	Fri 14/03/14
237	Document Repository Indexing & Planning	45 days	Mon 13/01/14	Fri 14/03/14
238	Load Documentation Into System	45 days	Mon 13/01/14	Fri 14/03/14
239	Confirm Readiness To Take Over System	21 days	Mon 02/06/14	Mon 30/06/14
240	*Migration*	**75 days**	**Mon 13/01/14**	**Fri 25/04/14**
241	Establish Enterprise Architecture	25 days	Mon 13/01/14	Fri 14/02/14
242	Define Project Portfolio, Projects Charter	10 days	Mon 17/02/14	Fri 28/02/14
243	Conduct It Projects	15 days	Mon 17/03/14	Fri 04/04/14
244	Deployment	75 days	Mon 13/01/14	Fri 25/04/14
245	Build New It Infrastructure	25 days	Mon 13/01/14	Fri 14/02/14
246	Transfer It Baseline Environment	45 days	Mon 13/01/14	Fri 14/03/14
247	*Coordination With Other Departments*	**110 days**	**Mon 20/01/14**	**Fri 20/06/14**

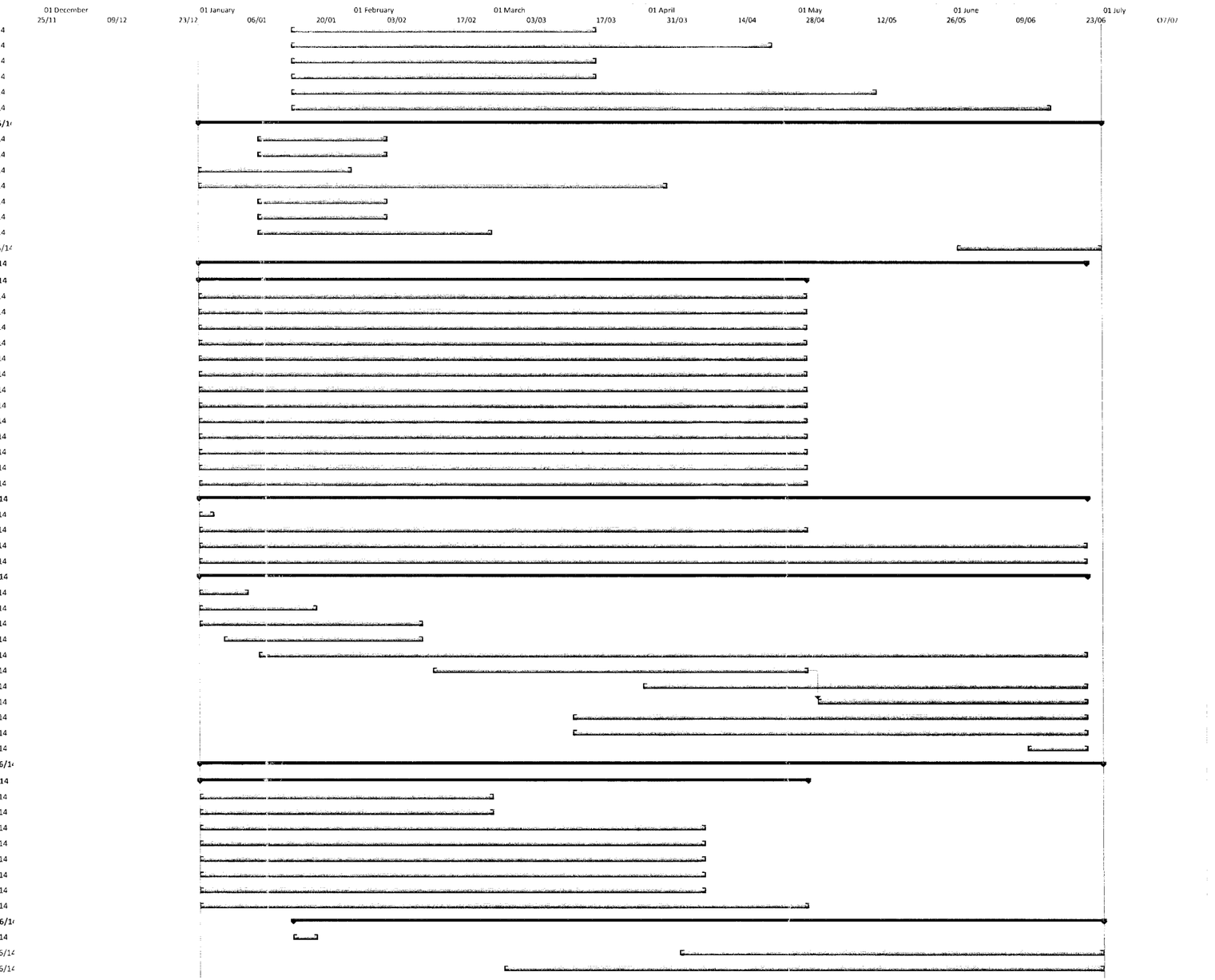


Projet : Boston Mobs
Date : Mon 05/08/13

Tâche · Fractionnement · Récapitulative · Jalon · Tâches externes · Récapitulatif du projet · Tâche inactive · Jalons externes · Récapitulatif inactif · Jalon inactif · Durée uniquement · Tâche manuelle · Récapitulatif manuel · Report récapitulatif manuel · Début uniquement · Fin uniquement · Échéance · Avancement

Page 4

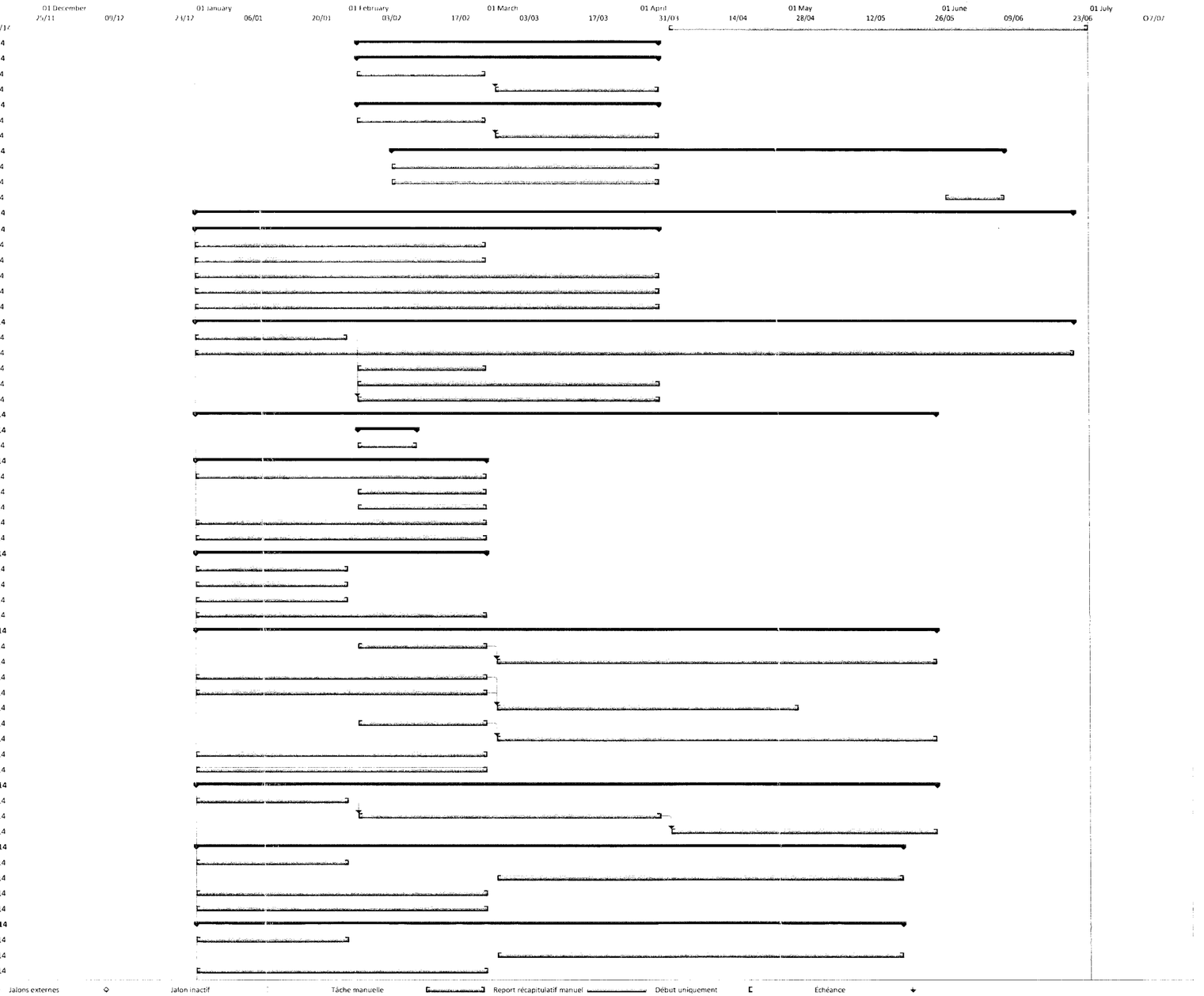
ID	Task Name	Duration	Start	Finish
248	Build Interface For Current Applications	45 days	Mon 20/01/14	Fri 21/03/14
249	Build Interface For ITP & RFID	70 days	Mon 20/01/14	Fri 25/04/14
250	Implement IVR	45 days	Mon 20/01/14	Fri 21/03/14
251	Implement ITP	45 days	Mon 20/01/14	Fri 21/03/14
252	Implement & Deploy RFIP	85 days	Mon 20/01/14	Fri 16/05/14
253	Coordination & Integration With Other Departments	110 days	Mon 20/01/14	Fri 20/06/14
254	*Joint Audit*	**129 days**	**Wed 01/01/14**	**Mon 30/06/14**
255	Review Of Critical Issues	20 days	Mon 13/01/14	Fri 07/02/14
256	Develop Critical Items List (Existing Systems, Databases & Interfaces)	20 days	Mon 13/01/14	Fri 07/02/14
257	Confirm Software Licensing/Maintenance Provisions	23 days	Wed 01/01/14	Fri 31/01/14
258	Confirm Hardware, Software & Infrastructure Adequacy & Planned Purchases & Upgrades	68 days	Wed 01/01/14	Fri 04/04/14
259	Review Critical Items with the MBTA	20 days	Mon 13/01/14	Fri 07/02/14
260	Conduct Joint Audit with the MBTA	20 days	Mon 13/01/14	Fri 07/02/14
261	Develop & Finalize Migration Plan	35 days	Mon 13/01/14	Fri 28/02/14
262	Confirm Readiness To Take Over System	21 days	Mon 02/06/14	Mon 30/06/14
263	**Quality Assurance Readiness**	**128 days**	**Wed 01/01/14**	**Fri 27/06/14**
264	*QDRL's*	**88 days**	**Wed 01/01/14**	**Fri 02/05/14**
265	Quality Assurance Program Plan (3.6-001)	88 days	Wed 01/01/14	Fri 02/05/14
266	Quality Control Manual For Transportation Services (3.6-002)	88 days	Wed 01/01/14	Fri 02/05/14
267	Quality Control Manual For Customer Service & Information (3.6-003)	88 days	Wed 01/01/14	Fri 02/05/14
268	Quality Control Manual For Engineering Services (3.6-004)	88 days	Wed 01/01/14	Fri 02/05/14
269	Quality Control Manual For Mechanical Services (3.6-005)	88 days	Wed 01/01/14	Fri 02/05/14
270	Quality Control Manual For Materials Management (3.6-006)	88 days	Wed 01/01/14	Fri 02/05/14
271	Calibration Standards, Processes, Procedures And Documentation (3.6-007)	88 days	Wed 01/01/14	Fri 02/05/14
272	Workmanship Standards (3.6-008)	88 days	Wed 01/01/14	Fri 02/05/14
273	Configuration Management Plan (3.6-010)	88 days	Wed 01/01/14	Fri 02/05/14
274	Software Configuration Management Plan (SCMP) (3.6-011)	88 days	Wed 01/01/14	Fri 02/05/14
275	The Operator Audit Plan (3.6-012)	88 days	Wed 01/01/14	Fri 02/05/14
276	Quality Control Manual For Capital Support (3.6-015)	88 days	Wed 01/01/14	Fri 02/05/14
277	Commuter Rail Function, Processes & Procedures Master List (3.6-009)	88 days	Wed 01/01/14	Fri 02/05/14
278	*General*	**128 days**	**Wed 01/01/14**	**Fri 27/06/14**
279	Kick-Off Meeting	3 days	Wed 01/01/14	Fri 03/01/14
280	Coordination Meetings	88 days	Wed 01/01/14	Fri 02/05/14
281	Project Monitoring, Validation, Arbitration, Change Control, Communications, Meetings	128 days	Wed 01/01/14	Fri 27/06/14
282	Project Management Plan And Progress Reports	128 days	Wed 01/01/14	Fri 27/06/14
283	*Other Quality Preparation*	**128 days**	**Wed 01/01/14**	**Fri 27/06/14**
284	Meetings With Contractors Planning Quality Assurance Development	8 days	Wed 01/01/14	Fri 10/01/14
285	Discovery Assessment Process To Expose Existing Documents, Procedures, Software, Etc.	18 days	Wed 01/01/14	Fri 24/01/14
286	Report And Action Plan Including Best Practices And Obstacles	33 days	Wed 01/01/14	Fri 14/02/14
287	Project Planning Process And Document Validation Process With Roles And Responsibilities	30 days	Mon 06/01/14	Fri 14/02/14
288	Project Plan Delivery And QAP Development Kick-Off	120 days	Mon 13/01/14	Fri 27/06/14
289	Quality Assurance Plan (QAP) Design	55 days	Mon 17/02/14	Fri 02/05/14
290	Quality Manual And Procedures	65 days	Mon 31/03/14	Fri 27/06/14
291	QAP Implementation	40 days	Mon 05/05/14	Fri 27/06/14
292	QAP Validation Audits	75 days	Mon 17/03/14	Fri 27/06/14
293	QAP Training	75 days	Mon 17/03/14	Fri 27/06/14
294	Identify Quality Assurance Representatives	10 days	Mon 16/06/14	Fri 27/06/14
295	**C.6. Transportation Services Readiness (Customer Service Readiness)**	**129 days**	**Wed 01/01/14**	**Mon 30/06/14**
296	*Transportation - ODRL's*	**88 days**	**Wed 01/01/14**	**Fri 02/05/14**
297	Transportation Service Plan (3.1-001)	43 days	Wed 01/01/14	Fri 28/02/14
298	Draft Policy And Procedure For Periodic Updates (3.1-021)	43 days	Wed 01/01/14	Fri 28/02/14
299	Operator Transportation Dept. Org Chart (3.1-011)	73 days	Wed 01/01/14	Fri 11/04/14
300	Draft Employee Timetable, Operating Rule Book And Train Dispatcher's Manual (3.1-022)	73 days	Wed 01/01/14	Fri 11/04/14
301	Spreadsheet Of Rule Books/Manuals (3.1-023)	73 days	Wed 01/01/14	Fri 11/04/14
302	Timetable Schedule Pages For Publication (3.1-024)	73 days	Wed 01/01/14	Fri 11/04/14
303	Train Staffing Plan (3.1-012)	73 days	Wed 01/01/14	Fri 11/04/14
304	Fare Collection Procedures (3.1-007)	88 days	Wed 01/01/14	Fri 02/05/14
305	*Transportation - General*	**116 days**	**Mon 20/01/14**	**Mon 30/06/14**
306	Kick-Off Meeting With Other Railroads	5 days	Mon 20/01/14	Fri 24/01/14
307	Review & Finalize Train & Crew Reporting Policies & Procedures	61 days	Mon 07/04/14	Mon 30/06/14
308	Review & Finalize Dispatching Policies & Procedures	86 days	Mon 03/03/14	Mon 30/06/14



Projet : Boston Mob5
Date : Mon 05/08/13

Tâche — Fractionnement — Récapitulative — Jalon — Tâches externes — Recapitulatif du projet — Tâche inactive — Jalons externes — Récapitulatif inactif — Durée uniquement — Jalon inactif — Tâche manuelle — Report récapitulatif manuel — Récapitulatif manuel — Début uniquement — Fin uniquement — Échéance — Avancement

ID	Task Name	Duration	Start	Finish
309	Coordinate With Dispatch Offices Handling MBTA Trains	61 days	Mon 07/04/14	Mon 30/06/14
310	*Transportation - Staffing*	**45 days**	**Mon 03/02/14**	**Fri 04/04/14**
311	T&E	**45 days**	**Mon 03/02/14**	**Fri 04/04/14**
312	Finalize Management Assignments	20 days	Mon 03/02/14	Fri 28/02/14
313	Finalize Train & Engine Crew Assignments	25 days	Mon 03/03/14	Fri 04/04/14
314	Dispatching	**45 days**	**Mon 03/02/14**	**Fri 04/04/14**
315	Finalize Management Assignments	20 days	Mon 03/02/14	Fri 28/02/14
316	Finalize Dispatching Assignments	25 days	Mon 03/03/14	Fri 04/04/14
317	*Incident Management*	**90 days**	**Mon 10/02/14**	**Fri 13/06/14**
318	Review & Develop Policies And Procedures	40 days	Mon 10/02/14	Fri 04/04/14
319	Review & Develop Notifications/Communications Procedures	40 days	Mon 10/02/14	Fri 04/04/14
320	Review Procedures With The MBTA	10 days	Mon 02/06/14	Fri 13/06/14
321	**Customer Service Readiness**	**128 days**	**Wed 01/01/14**	**Fri 27/06/14**
322	*Customer Service - QDRL's*	**68 days**	**Wed 01/01/14**	**Fri 04/04/14**
323	Lost And Found Procedures (3.7-001)	43 days	Wed 01/01/14	Fri 28/02/14
324	Alternate Transportation Protocols (3.7-007)	43 days	Wed 01/01/14	Fri 28/02/14
325	List Of Alternate Transportation Bus Lines (3.7-008)	68 days	Wed 01/01/14	Fri 04/04/14
326	Customer Service Satisfaction Plan (3.7-012)	68 days	Wed 01/01/14	Fri 04/04/14
327	Media Communications Event List (3.7-014)	68 days	Wed 01/01/14	Fri 04/04/14
328	*Customer Service - General*	**128 days**	**Wed 01/01/14**	**Fri 27/06/14**
329	Review Customer Service Policies & Procedures	23 days	Wed 01/01/14	Fri 31/01/14
330	Meetings With The MBTA Contact	128 days	Wed 01/01/14	Fri 27/06/14
331	Review Customer Service Assignments	20 days	Mon 03/02/14	Fri 28/02/14
332	Review Reporting Procedures	45 days	Mon 03/02/14	Fri 04/04/14
333	Develop Customer Service Charter	45 days	Mon 03/02/14	Fri 04/04/14
334	*Customer Service - Public Information Services*	**108 days**	**Wed 01/01/14**	**Fri 30/05/14**
335	Trailblazers Inventory	**10 days**	**Mon 03/02/14**	**Fri 14/02/14**
336	Perform Trailblazers inventory	10 days	Mon 03/02/14	Fri 14/02/14
337	Information Booths	**43 days**	**Wed 01/01/14**	**Fri 28/02/14**
338	Review Staffing, Policies & Procedures At Booths	43 days	Wed 01/01/14	Fri 28/02/14
339	Review Signage, Lightning, Visibility Of Booths	20 days	Mon 03/02/14	Fri 28/02/14
340	Develop Customer Service Training Plans And Programs	20 days	Mon 03/02/14	Fri 28/02/14
341	Develop Customer Service Handbook	43 days	Wed 01/01/14	Fri 28/02/14
342	Develop New Policies & Procedures If Needed/Required	43 days	Wed 01/01/14	Fri 28/02/14
343	Printed Materials	**43 days**	**Wed 01/01/14**	**Fri 28/02/14**
344	Establish Date Of Next Schedule Update	23 days	Wed 01/01/14	Fri 31/01/14
345	Review Procedures For Stocking Of Materials	23 days	Wed 01/01/14	Fri 31/01/14
346	Review Policies & Procedures For Posting Promotional Materials And Information	23 days	Wed 01/01/14	Fri 31/01/14
347	Develop New Policies & Procedures If Required For Posting Materials	43 days	Wed 01/01/14	Fri 28/02/14
348	Announcements/Messages	**108 days**	**Wed 01/01/14**	**Fri 30/05/14**
349	Review Passenger Announcements At Stations	20 days	Mon 03/02/14	Fri 28/02/14
350	Analyze & Develop Training Programs For Announcements	65 days	Mon 03/03/14	Fri 30/05/14
351	Develop Customer Service Handbook - Announcements	43 days	Wed 01/01/14	Fri 28/02/14
352	Develop New Policies & Procedures For Announcements If Required	43 days	Wed 01/01/14	Fri 28/02/14
353	Review PTIS LED Signs At Stations	45 days	Mon 03/03/14	Fri 02/05/14
354	Review On-Board Passenger Announcements	20 days	Mon 03/02/14	Fri 28/02/14
355	Analyze & Develop Training Programs For On-Board Announcements	65 days	Mon 03/03/14	Fri 30/05/14
356	Develop Customer Service Handbook - On-Board Announcements	43 days	Wed 01/01/14	Fri 28/02/14
357	Develop New Policies & Procedures For On-Board Announcements If Required	43 days	Wed 01/01/14	Fri 28/02/14
358	Passenger Information Audit	**108 days**	**Wed 01/01/14**	**Fri 30/05/14**
359	Audit All Visible Passenger Information	23 days	Wed 01/01/14	Fri 31/01/14
360	Prepare & Submit Report To The MBTA	45 days	Mon 03/02/14	Fri 04/04/14
361	Develop Update Program If Necessary	40 days	Mon 07/04/14	Fri 30/05/14
362	*Lost And Found Services*	**103 days**	**Wed 01/01/14**	**Fri 23/05/14**
363	Review Lost & Found Policies & Procedures	23 days	Wed 01/01/14	Fri 31/01/14
364	Analyze & Develop Training Programs For Lost & Found	60 days	Mon 03/03/14	Fri 23/05/14
365	Develop Customer Service Handbook - Lost & Found	43 days	Wed 01/01/14	Fri 28/02/14
366	Develop New Policies & Procedures For Lost & Found If Required	43 days	Wed 01/01/14	Fri 28/02/14
367	*Comment/Complaint Process*	**103 days**	**Wed 01/01/14**	**Fri 23/05/14**
368	Review Comment/Complaint Policies & Procedures	23 days	Wed 01/01/14	Fri 31/01/14
369	Analyze & Develop Training Programs For Comment/Complaint	60 days	Mon 03/03/14	Fri 23/05/14
370	Develop Customer Service Handbook - Comment/Complaint	43 days	Wed 01/01/14	Fri 28/02/14

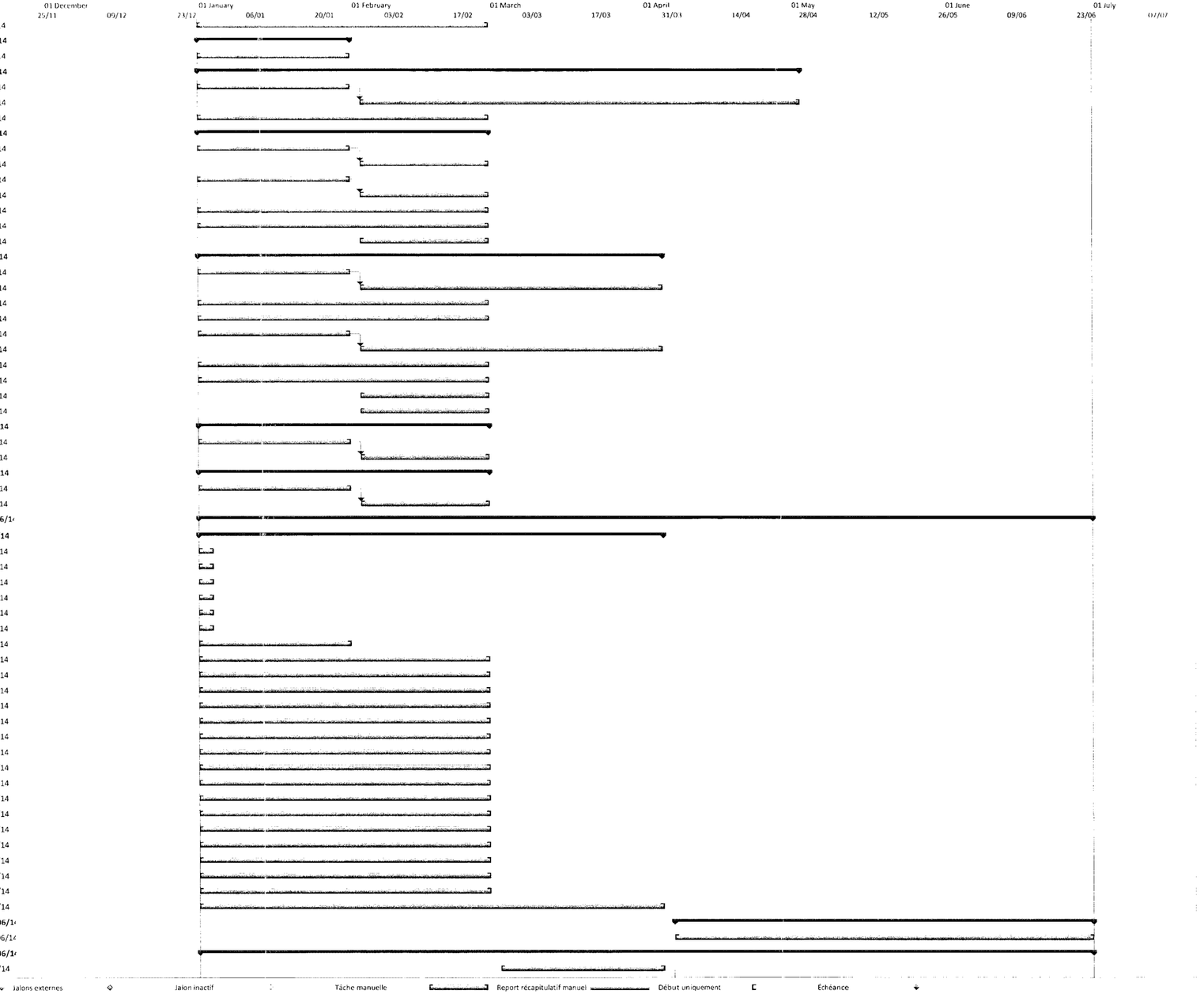


Projet : Boston Mob5
Date : Mon 05/08/13

Tâche · Fractionnement · Jalon · Récapitulative · Récapitulatif du projet · Tâches externes · Jalons externes · Tâche inactive · Jalon inactif · Récapitulatif inactif · Tâche manuelle · Durée uniquement · Report récapitulatif manuel · Récapitulatif manuel · Début uniquement · Fin uniquement · Echéance · Avancement

Page 6

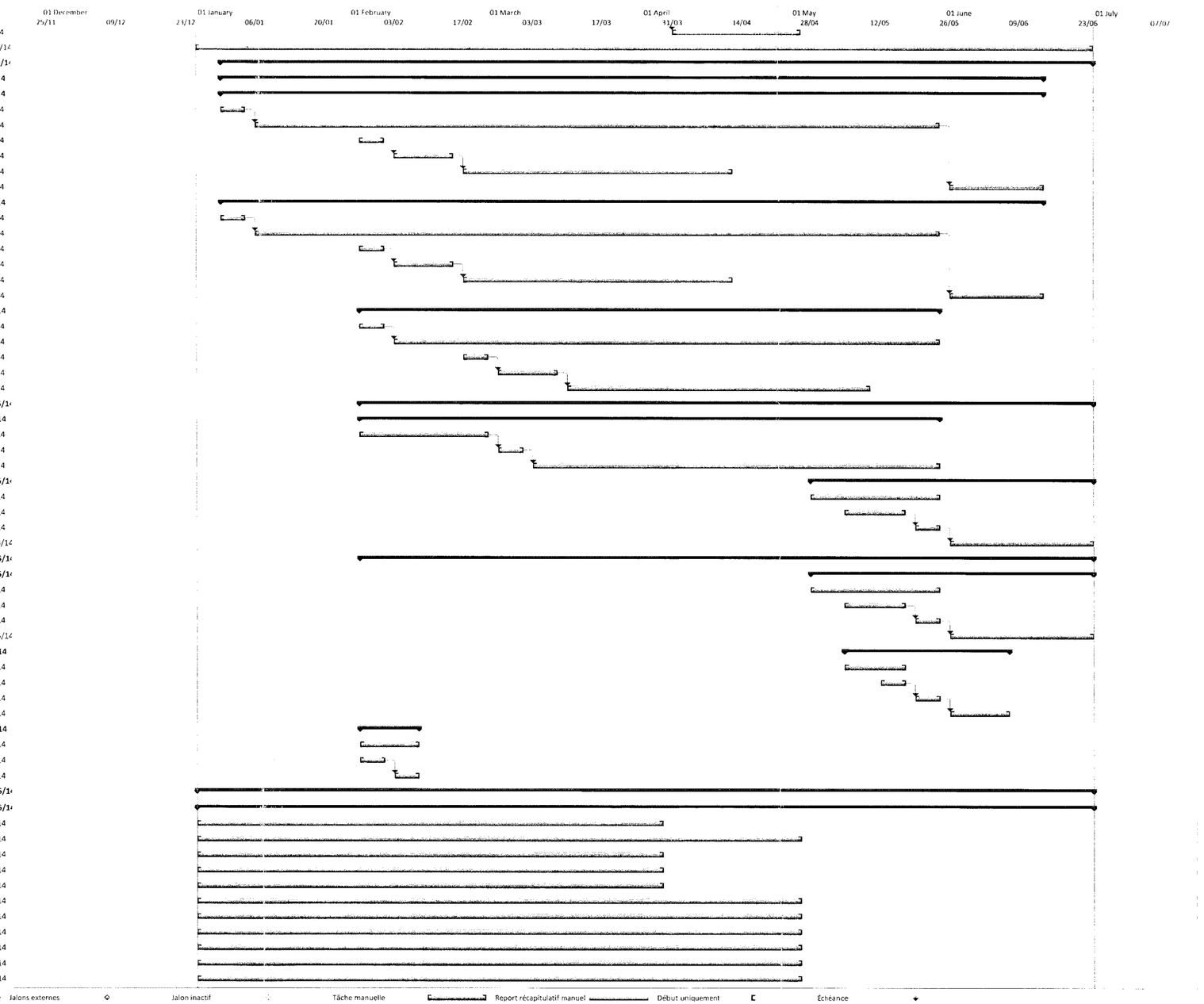
ID	Task Name	Duration	Start	Finish
371	Develop New Policies & Procedures For Comment/Complaint If Required	43 days	Wed 01/01/14	Fri 28/02/14
372	*Alternate Transportation Services (+ ODRL's)*	**23 days**	**Wed 01/01/14**	**Fri 31/01/14**
373	Review Alternate Transportation Policies & Procedures	23 days	Wed 01/01/14	Fri 31/01/14
374	*Ada Compliance*	**88 days**	**Wed 01/01/14**	**Fri 02/05/14**
375	Review Ada Compliance Policies & Procedures	23 days	Wed 01/01/14	Fri 31/01/14
376	Analyze & Develop Training Programs For ADA Compliance	65 days	Mon 03/02/14	Fri 02/05/14
377	Develop Customer Service Handbook - Ada Compliance	43 days	Wed 01/01/14	Fri 28/02/14
378	*Service Disruption/Special Event Information*	**43 days**	**Wed 01/01/14**	**Fri 28/02/14**
379	Review Passenger Information Posting Policies & Procedures	23 days	Wed 01/01/14	Fri 31/01/14
380	Develop New Policies & Procedures For Passenger Information Posting If Required	20 days	Mon 03/02/14	Fri 28/02/14
381	Review Relaying Information Policies & Procedures	23 days	Wed 01/01/14	Fri 31/01/14
382	Analyze & Develop Training Programs For Service Disruption/Special Event Information	20 days	Mon 03/02/14	Fri 28/02/14
383	Develop Customer Service Handbook - Service Disruption/Special Event Information	43 days	Wed 01/01/14	Fri 28/02/14
384	Develop New Policies & Procedures For Service Disruption/Special Event Information If Required	43 days	Wed 01/01/14	Fri 28/02/14
385	Review Service Disruption/Special Event Information Program	20 days	Mon 03/02/14	Fri 28/02/14
386	*Ticketing*	**68 days**	**Wed 01/01/14**	**Fri 04/04/14**
387	Review Policies & Procedures At Ticket Booths	23 days	Wed 01/01/14	Fri 31/01/14
388	Analyze & Develop Training Programs At Ticket Booths	45 days	Mon 03/02/14	Fri 04/04/14
389	Develop Customer Service Handbook - Ticket Booths	43 days	Wed 01/01/14	Fri 28/02/14
390	Develop New Policies & Procedures For Ticket Booths If Required	43 days	Wed 01/01/14	Fri 28/02/14
391	Review On-Board Ticketing Policies & Procedures	23 days	Wed 01/01/14	Fri 31/01/14
392	Analyze & Develop On-Board Ticketing Training Programs	45 days	Mon 03/02/14	Fri 04/04/14
393	Develop Customer Service Handbook - On-Board Ticketing	43 days	Wed 01/01/14	Fri 28/02/14
394	Develop New Policies & Procedures For On-Board Ticketing If Required	43 days	Wed 01/01/14	Fri 28/02/14
395	Review The MBTA Fare Policy	20 days	Mon 03/02/14	Fri 28/02/14
396	Review & Develop Ticket Sales & Revenue Accounting Procedures	20 days	Mon 03/02/14	Fri 28/02/14
397	*Cleanliness*	**43 days**	**Wed 01/01/14**	**Fri 28/02/14**
398	Review Cleanliness Policies & Procedures	23 days	Wed 01/01/14	Fri 31/01/14
399	Develop New Policies & Procedures For Cleanliness If Required	20 days	Mon 03/02/14	Fri 28/02/14
400	*Customer Surveys*	**43 days**	**Wed 01/01/14**	**Fri 28/02/14**
401	Review And Analyze Previous Customer Surveys	23 days	Wed 01/01/14	Fri 31/01/14
402	Develop Customer Satisfaction Tracking Survey	20 days	Mon 03/02/14	Fri 28/02/14
403	**C.7. Mechanical Services Readiness**	**129 days**	**Wed 01/01/14**	**Mon 30/06/14**
404	*ODRL's*	**68 days**	**Wed 01/01/14**	**Fri 04/04/14**
405	Equipment List (Elist) – Proposed (3.3-001)	3 days	Wed 01/01/14	Fri 03/01/14
406	Maintenance Allocation Chart (Mac) – The Operator Proposed (3.3-003)	3 days	Wed 01/01/14	Fri 03/01/14
407	Life Cycle Maintenance (Lcm) Program – The Operator Proposed (3.3-005)	3 days	Wed 01/01/14	Fri 03/01/14
408	Comprehensive Preventive Maintenance, Inspection And Cleaning Plan (3.3-007)	3 days	Wed 01/01/14	Fri 03/01/14
409	Cleaning Standards – Proposed ((3.3-009)	3 days	Wed 01/01/14	Fri 03/01/14
410	Maintenance Management System Procurement Specification For Review And Approval (3.3-023)	3 days	Wed 01/01/14	Fri 03/01/14
411	Maintenance Operation And Fleet Performance Report Format For Review And Approval (3.3-026)	23 days	Wed 01/01/14	Fri 31/01/14
412	Equipment List (ELIST) – Submitted For Final Approval (3.3-002)	43 days	Wed 01/01/14	Fri 28/02/14
413	Maintenance Allocation Chart (MAC) – Submitted For Final Approval (3.3-004)	43 days	Wed 01/01/14	Fri 28/02/14
414	Life Cycle Maintenance (LCM) Program – Submitted For Final Approval (3.3-006)	43 days	Wed 01/01/14	Fri 28/02/14
415	Comprehensive Preventive Maintenance, Inspection And Cleaning Plan - Submitted For Final Approval (3.3-008)	43 days	Wed 01/01/14	Fri 28/02/14
416	Cleaning Standards – Submitted For Final Approval (3.3-010)	43 days	Wed 01/01/14	Fri 28/02/14
417	Fleet Maintenance Plan – For Final Approval (3.3-012)	43 days	Wed 01/01/14	Fri 28/02/14
418	Weekly Maintenance Production Plan – Proposed Draft Form (3.3-014)	43 days	Wed 01/01/14	Fri 28/02/14
419	Weekly Maintenance Production Report (3.3-016)	43 days	Wed 01/01/14	Fri 28/02/14
420	Maintenance Management System Plan (3.3-018)	43 days	Wed 01/01/14	Fri 28/02/14
421	Maintenance Standards Manual (MSM) (3.3-019)	43 days	Wed 01/01/14	Fri 28/02/14
422	Calibration Procedure Management Plan (3.3-020)	43 days	Wed 01/01/14	Fri 28/02/14
423	Rail Vehicle Non-Revenue Fleet – Comprehensive Preventive Maintenance Program (3.3-021)	43 days	Wed 01/01/14	Fri 28/02/14
424	Mobile Wreck Cranes – Comprehensive Preventative Maintenance Program (3.3-022)	43 days	Wed 01/01/14	Fri 28/02/14
425	Fra Defect Report – Rolling Stock (3.3-024)	43 days	Wed 01/01/14	Fri 28/02/14
426	Fra Compliance Management Plan (3.3-025)	43 days	Wed 01/01/14	Fri 28/02/14
427	Maintenance Cost Per Vehicle Per Year (3.3-028)	43 days	Wed 01/01/14	Fri 28/02/14
428	Maintenance Interval Forms – Submitted For Approval (3.3-011)	68 days	Wed 01/01/14	Fri 04/04/14
429	*General*	**61 days**	**Mon 07/04/14**	**Mon 30/06/14**
430	Negotiate MTBSF Requirements For Legacy Rolling Stock For Each Year Of Calendar Years 2014 Through 2020	61 days	Mon 07/04/14	Mon 30/06/14
431	*Staffing*	**129 days**	**Wed 01/01/14**	**Mon 30/06/14**
432	Finalize Management Assignments	25 days	Mon 03/03/14	Fri 04/04/14



Projet : Boston Mob5
Date : Mon 05/08/13

Tâche — Fractionnement — Jalon — Récapitulative — Récapitulatif du projet — Tâches externes — Jalons externes — Tâche inactive — Jalon inactif — Récapitulatif inactif — Tâche manuelle — Durée uniquement — Report récapitulatif manuel — Récapitulatif manuel — Début uniquement — Fin uniquement — Échéance — Avancement

ID	Task Name	Duration	Start	Finish
433	Finalize Workforce Assignments	20 days	Mon 07/04/14	Fri 02/05/14
434	Review & Finalize Reporting Policies & Procedures	129 days	Wed 01/01/14	Mon 30/06/14
435	*Joint Audit*	**126 days**	**Mon 06/01/14**	**Mon 30/06/14**
436	Service Equipment	**120 days**	**Mon 06/01/14**	**Fri 20/06/14**
437	*Locomotives (Revenue & Non-Revenue)*	**120 days**	**Mon 06/01/14**	**Fri 20/06/14**
438	Prepare Inspection Forms	5 days	Mon 06/01/14	Fri 10/01/14
439	Perform Joint Audit	100 days	Mon 13/01/14	Fri 30/05/14
440	Prepare Joint Audit Report	5 days	Mon 03/02/14	Fri 07/02/14
441	Review Critical Items with the MBTA	10 days	Mon 10/02/14	Fri 21/02/14
442	Identify Priority Procurements/Repairs	40 days	Mon 24/02/14	Fri 18/04/14
443	Execute Priority Procurements	15 days	Mon 02/06/14	Fri 20/06/14
444	*Rail Coaches*	**120 days**	**Mon 06/01/14**	**Fri 20/06/14**
445	Prepare Inspection Forms	5 days	Mon 06/01/14	Fri 10/01/14
446	Perform Joint Audit	100 days	Mon 13/01/14	Fri 30/05/14
447	Prepare Joint Audit Report	5 days	Mon 03/02/14	Fri 07/02/14
448	Review Critical Items with the MBTA	10 days	Mon 10/02/14	Fri 21/02/14
449	Identify Priority Procurements/Repairs	40 days	Mon 24/02/14	Fri 18/04/14
450	Execute Priority Procurements	15 days	Mon 02/06/14	Fri 20/06/14
451	*Non-Revenue Train Equipment*	**85 days**	**Mon 03/02/14**	**Fri 30/05/14**
452	Prepare Inspection Forms	5 days	Mon 03/02/14	Fri 07/02/14
453	Perform Joint Audit	80 days	Mon 10/02/14	Fri 30/05/14
454	Prepare Joint Audit Report	5 days	Mon 24/02/14	Fri 28/02/14
455	Review Critical Items with the MBTA	10 days	Mon 03/03/14	Fri 14/03/14
456	Execute Priority Procurements	45 days	Mon 17/03/14	Fri 16/05/14
457	Support Property Review	**106 days**	**Mon 03/02/14**	**Mon 30/06/14**
458	*Work Equipment*	**85 days**	**Mon 03/02/14**	**Fri 30/05/14**
459	Prepare Joint Audit Report	20 days	Mon 03/02/14	Fri 28/02/14
460	Review Critical Items with the MBTA	5 days	Mon 03/03/14	Fri 07/03/14
461	Execute Priority Procurements	60 days	Mon 10/03/14	Fri 30/05/14
462	*Tools – Mechanical*	**41 days**	**Mon 05/05/14**	**Mon 30/06/14**
463	Initial Joint Audit And Review Of Critical Issues	20 days	Mon 05/05/14	Fri 30/05/14
464	Critical Items List	10 days	Mon 12/05/14	Fri 23/05/14
465	Meet with the MBTA About Critical Issues	5 days	Mon 26/05/14	Fri 30/05/14
466	Execute Priority Procurements	21 days	Mon 02/06/14	Mon 30/06/14
467	Support Inventory Review	**106 days**	**Mon 03/02/14**	**Mon 30/06/14**
468	*Spare Parts/Consumables/Capital Spares*	**41 days**	**Mon 05/05/14**	**Mon 30/06/14**
469	Initial Joint Audit And Review Of Critical Issues	20 days	Mon 05/05/14	Fri 30/05/14
470	Critical Items List	10 days	Mon 12/05/14	Fri 23/05/14
471	Meet With MBTA About Critical Issues	5 days	Mon 26/05/14	Fri 30/05/14
472	Execute Priority Procurements	21 days	Mon 02/06/14	Mon 30/06/14
473	*Supplies - Mechanical*	**25 days**	**Mon 12/05/14**	**Fri 13/06/14**
474	Initial Joint Audit And Review Of Critical Issues	10 days	Mon 12/05/14	Fri 23/05/14
475	Critical Items List	5 days	Mon 19/05/14	Fri 23/05/14
476	Meet With MBTA About Critical Issues	5 days	Mon 26/05/14	Fri 30/05/14
477	Execute Priority Procurements	10 days	Mon 02/06/14	Fri 13/06/14
478	*Documentation - Mechanical*	**10 days**	**Mon 03/02/14**	**Fri 14/02/14**
479	Initial Joint Audit And Review Of Critical Issues	10 days	Mon 03/02/14	Fri 14/02/14
480	Critical Items List	5 days	Mon 03/02/14	Fri 07/02/14
481	Meet With MBTA About Critical Issues	5 days	Mon 10/02/14	Fri 14/02/14
482	**C.8. Engineering Services Readiness**	**129 days**	**Wed 01/01/14**	**Mon 30/06/14**
483	*ODRL's*	**129 days**	**Wed 01/01/14**	**Mon 30/06/14**
484	Engineering Services Plan (3.2-001)	68 days	Wed 01/01/14	Fri 04/04/14
485	Temporary Speed Restriction Removal Schedule (3.2-018)	88 days	Wed 01/01/14	Fri 02/05/14
486	Station Inspection Form (3.2-024)	68 days	Wed 01/01/14	Fri 04/04/14
487	Preliminary Support Property & Facilities Maintenance Plan (3.2-026)	68 days	Wed 01/01/14	Fri 04/04/14
488	Facility Inspection Form (ODRL 3.2-028)	68 days	Wed 01/01/14	Fri 04/04/14
489	Rolling Stock Support Equipment (RSSE) Condition Assessment (3.2-029)	88 days	Wed 01/01/14	Fri 02/05/14
490	Preliminary Elevator & Escalator Inspection & Maintenance Program (3.2-037)	88 days	Wed 01/01/14	Fri 02/05/14
491	Preliminary Station, Building And Facility Maintenance Program (3.2-039)	88 days	Wed 01/01/14	Fri 02/05/14
492	Preliminary Bridge Maintenance Plan (3.2-050)	88 days	Wed 01/01/14	Fri 02/05/14
493	Preliminary Drawbridge Maintenance Plan (3.2-052)	88 days	Wed 01/01/14	Fri 02/05/14
494	Preliminary Drawbridge Operation Manual (3.2-054)	88 days	Wed 01/01/14	Fri 02/05/14

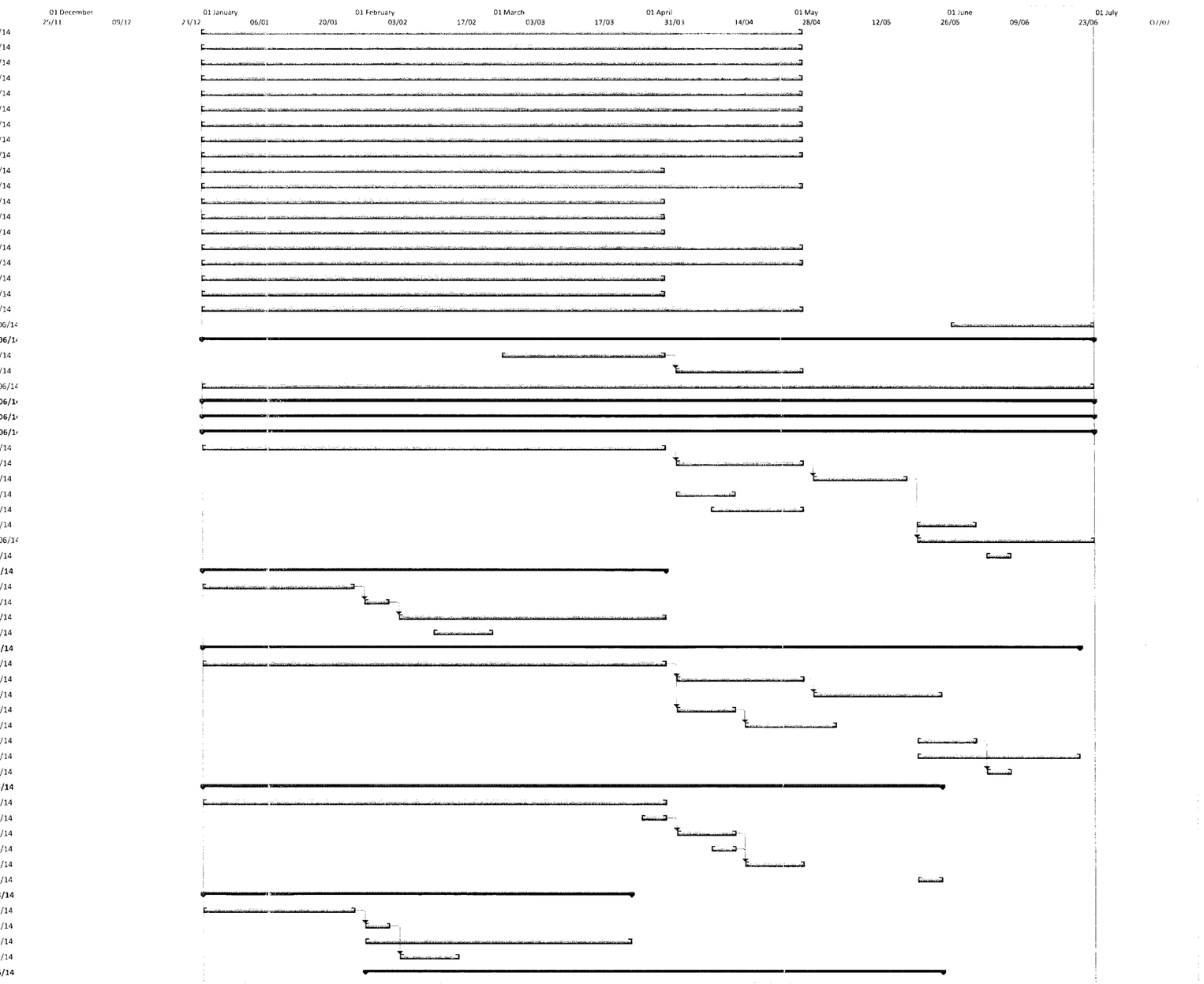


Projet : Boston Mob5 Date : Mon 05/08/13

Tâche · Fractionnement · Récapitulative · Tâches externes · Jalon · Récapitulatif du projet · Jalons externes · Jalon inactif · Tâche manuelle · Report récapitulatif manuel · Début uniquement · Échéance · Tâche inactive · Récapitulatif inactif · Durée uniquement · Récapitulatif manuel · Fin uniquement · Avancement

Page 8

ID	Task Name	Duration	Start	Finish
495	Preliminary Timber Bridge Deck Replacement Plan (3.2-057)	88 days	Wed 01/01/14	Fri 02/05/14
496	Preliminary Tunnel Operation And Maintenance Manual (3.2-059)	88 days	Wed 01/01/14	Fri 02/05/14
497	Preliminary Culvert Replacement Plan (3.2-061)	88 days	Wed 01/01/14	Fri 02/05/14
498	Preliminary Signal Failure Reduction Program (3.2-066)	88 days	Wed 01/01/14	Fri 02/05/14
499	Preliminary Grade Crossing Event Recorder Program (3.2-074)	88 days	Wed 01/01/14	Fri 02/05/14
500	Preliminary Interlocking Event Recorder Program (3.2-078)	88 days	Wed 01/01/14	Fri 02/05/14
501	Preliminary Switch Machine Replacement Plan (3.2-080)	88 days	Wed 01/01/14	Fri 02/05/14
502	Preliminary Pole Line Retirement And Replacement Program (3.2-082)	88 days	Wed 01/01/14	Fri 02/05/14
503	Preliminary Pole Replacement Program (3.2-084)	88 days	Wed 01/01/14	Fri 02/05/14
504	Lock Out / Tag Out Procedure (3.2-085)	68 days	Wed 01/01/14	Fri 04/04/14
505	Electrical And Lighting Equipment Field Inspection & Asset Inventory Date (3.2-086)	88 days	Wed 01/01/14	Fri 02/05/14
506	Electrical Testing And Maintenance Plan (3.2-087)	68 days	Wed 01/01/14	Fri 04/04/14
507	Electrical Maintenance & Testing Report Template (3.2-091)	68 days	Wed 01/01/14	Fri 04/04/14
508	Electric Service Database (3.2-096)	68 days	Wed 01/01/14	Fri 04/04/14
509	Energy Consumption Strategy (3.2-097)	88 days	Wed 01/01/14	Fri 02/05/14
510	Non-Revenue Vehicle & Work Equipment Inspection Form (3.2-099)	88 days	Wed 01/01/14	Fri 02/05/14
511	Annual Fuel Usage Audit Report Form (3.2-101)	68 days	Wed 01/01/14	Fri 04/04/14
512	Fire Protection System/Call Box Inventory (3.2-109)	68 days	Wed 01/01/14	Fri 04/04/14
513	Facility Condition Assessment (3.2-110)	88 days	Wed 01/01/14	Fri 02/05/14
514	Tie Replacement Plan (3.2-017)	21 days	Mon 02/06/14	Mon 30/06/14
515	*Staffing*	**129 days**	**Wed 01/01/14**	**Mon 30/06/14**
516	Finalize Management Assignments	25 days	Mon 03/03/14	Fri 04/04/14
517	Finalize Workforce Assignments	20 days	Mon 07/04/14	Fri 02/05/14
518	Review & Finalize Reporting Policies & Procedures	129 days	Wed 01/01/14	Mon 30/06/14
519	*Joint Audit*	**129 days**	**Wed 01/01/14**	**Mon 30/06/14**
520	Information Systems Review	**129 days**	**Wed 01/01/14**	**Mon 30/06/14**
521	*Engineering CMMS*	**129 days**	**Wed 01/01/14**	**Mon 30/06/14**
522	Review & Confirm System Requirements	68 days	Wed 01/01/14	Fri 04/04/14
523	Review Planned Software Purchase With The MBTA	20 days	Mon 07/04/14	Fri 02/05/14
524	Purchase Software If Necessary	15 days	Mon 05/05/14	Fri 23/05/14
525	Confirm Hardware & Infrastructure Adequacy	10 days	Mon 07/04/14	Fri 18/04/14
526	Finalize Interface Requirements/Plan	15 days	Mon 14/04/14	Fri 02/05/14
527	Installation & Testing Of System & Interfaces	10 days	Mon 26/05/14	Fri 06/06/14
528	Training In System Use And Capabilities	26 days	Mon 26/05/14	Mon 30/06/14
529	Confirm Readiness To Operate System	5 days	Mon 09/06/14	Fri 13/06/14
530	*Revenue Vehicle Fleet Management System*	**68 days**	**Wed 01/01/14**	**Fri 04/04/14**
531	Review & Confirm System Requirements	23 days	Wed 01/01/14	Fri 31/01/14
532	Purchase Software	5 days	Mon 03/02/14	Fri 07/02/14
533	Implement GPS System On Vehicles	40 days	Mon 10/02/14	Fri 04/04/14
534	Training In System Use And Capabilities	10 days	Mon 17/02/14	Fri 28/02/14
535	*Materials System*	**128 days**	**Wed 01/01/14**	**Fri 27/06/14**
536	Review/Confirm System Requirements	68 days	Wed 01/01/14	Fri 04/04/14
537	Review Planned Software Purchase W/ MBTA	20 days	Mon 07/04/14	Fri 02/05/14
538	Purchase Software If Necessary	20 days	Mon 05/05/14	Fri 30/05/14
539	Confirm Hardware & Infrastructure Adequacy	10 days	Mon 07/04/14	Fri 18/04/14
540	Finalize Interface Requirements/Plan	15 days	Mon 21/04/14	Fri 09/05/14
541	Installation & Testing Of System & Interfaces	10 days	Mon 26/05/14	Fri 06/06/14
542	Training In System Use And Capabilities	25 days	Mon 26/05/14	Fri 27/06/14
543	Confirm Readiness To Operate System	5 days	Mon 09/06/14	Fri 13/06/14
544	*Auto Cad System*	**108 days**	**Wed 01/01/14**	**Fri 30/05/14**
545	Review Auto Cad Functions & System Requirements	68 days	Wed 01/01/14	Fri 04/04/14
546	Confirm Software Licensing/Maint Agreement	5 days	Mon 31/03/14	Fri 04/04/14
547	Confirm Hardware & Infrastructure Adequacy	10 days	Mon 07/04/14	Fri 18/04/14
548	Determine Interface Requirements/Status	5 days	Mon 14/04/14	Fri 18/04/14
549	Training In System Use And Capabilities	10 days	Mon 21/04/14	Fri 02/05/14
550	Confirm Readiness To Take Over Autocad System	5 days	Mon 26/05/14	Fri 30/05/14
551	*GIS System*	**63 days**	**Wed 01/01/14**	**Fri 28/03/14**
552	Review/Confirm System Requirements	23 days	Wed 01/01/14	Fri 31/01/14
553	Purchase Software	5 days	Mon 03/02/14	Fri 07/02/14
554	Implement GPS System On Vehicles	40 days	Mon 03/02/14	Fri 28/03/14
555	Training In System Use And Capabilities	10 days	Mon 10/02/14	Fri 21/02/14
556	Service Property Review	**85 days**	**Mon 03/02/14**	**Fri 30/05/14**



Projet : Boston Mob5
Date : Mon 05/08/13

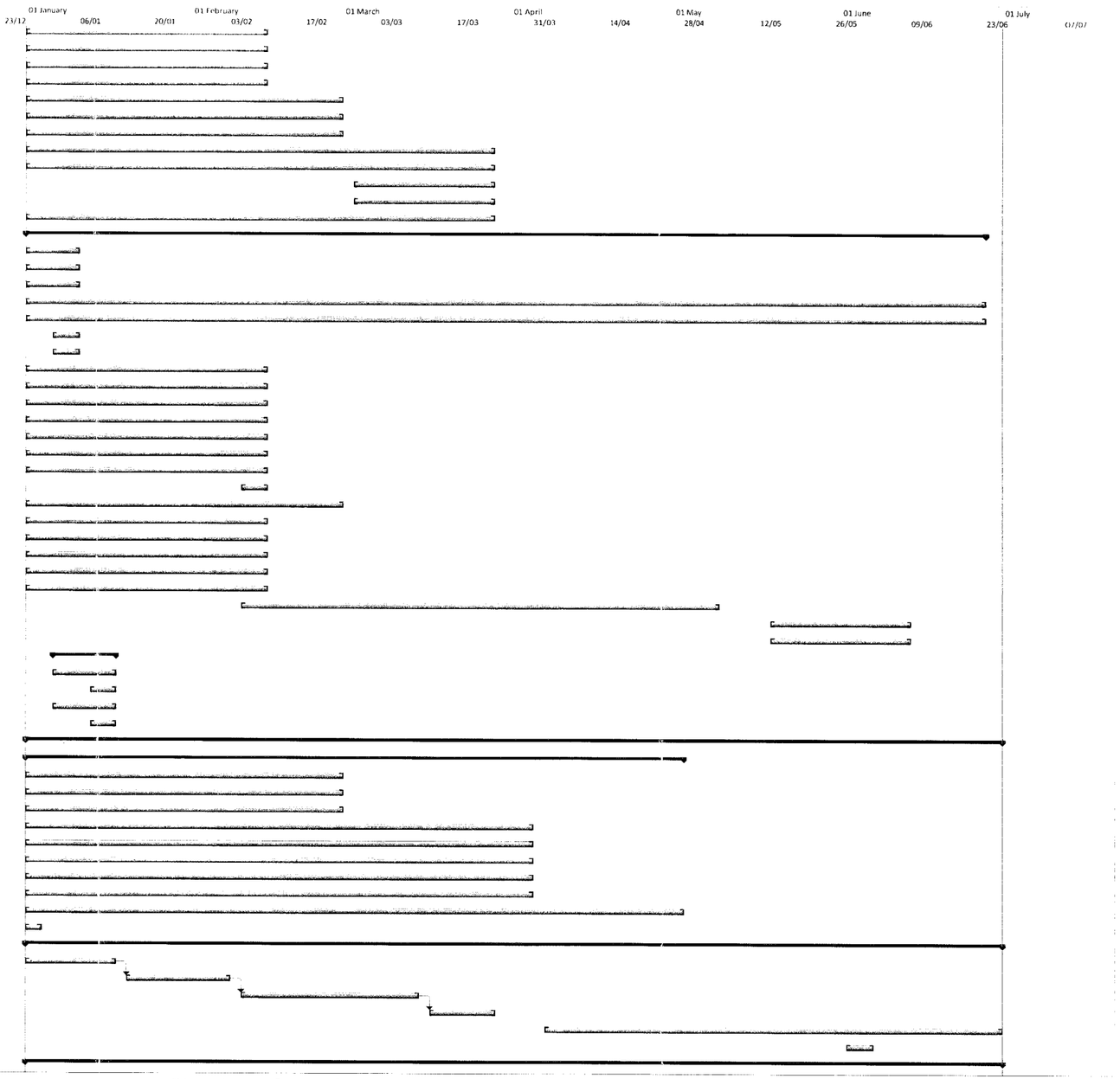
Tâche · Fractionnement · Jalon · Récapitulative · Récapitulatif du projet · Tâches externes · Jalons externes · Tâche inactive · Jalon inactif · Récapitulatif inactif · Tâche manuelle · Durée uniquement · Report récapitulatif manuel · Récapitulatif manuel · Début uniquement · Fin uniquement · Échéance · Avancement

ID	Task Name	Duration	Start	Finish
557	*Track And Right Of Way*	**70 days**	**Mon 03/02/14**	**Fri 09/05/14**
558	Initial Joint Audit And Review Of Critical Issues	60 days	Mon 03/02/14	Fri 25/04/14
559	Meet With MBTA About Critical Issues	5 days	Mon 05/05/14	Fri 09/05/14
560	*Bridges And Culverts*	**45 days**	**Mon 03/03/14**	**Fri 02/05/14**
561	Initial Joint Audit And Review Of Critical Issues	35 days	Mon 03/03/14	Fri 18/04/14
562	Meet With MBTA About Critical Issues	5 days	Mon 28/04/14	Fri 02/05/14
563	*Signal Systems*	**50 days**	**Mon 03/02/14**	**Fri 11/04/14**
564	Initial Joint Audit And Review Of Critical Issues	40 days	Mon 03/02/14	Fri 28/03/14
565	Meet With MBTA About Critical Issues	5 days	Mon 07/04/14	Fri 11/04/14
566	*Communication Systems*	**25 days**	**Mon 31/03/14**	**Fri 02/05/14**
567	Initial Joint Audit And Review Of Critical Issues	15 days	Mon 31/03/14	Fri 18/04/14
568	Meet With MBTA About Critical Issues	5 days	Mon 28/04/14	Fri 02/05/14
569	*Electrical Equipment*	**25 days**	**Mon 28/04/14**	**Fri 30/05/14**
570	Initial Joint Audit And Review Of Critical Issues	20 days	Mon 28/04/14	Fri 23/05/14
571	Meet With MBTA About Critical Issues	5 days	Mon 26/05/14	Fri 30/05/14
572	*Stations*	**50 days**	**Mon 03/02/14**	**Fri 11/04/14**
573	Initial Joint Audit And Review Of Critical Issues	45 days	Mon 03/02/14	Fri 04/04/14
574	Meet With MBTA About Critical Issues	5 days	Mon 07/04/14	Fri 11/04/14
575	*Layover Facilities*	**50 days**	**Mon 03/02/14**	**Fri 11/04/14**
576	Initial Joint Audit And Review Of Critical Issues	45 days	Mon 03/02/14	Fri 04/04/14
577	Meet With MBTA About Critical Issues	5 days	Mon 07/04/14	Fri 11/04/14
578	*Engineering Facilities*	**50 days**	**Mon 03/02/14**	**Fri 11/04/14**
579	Initial Joint Audit And Review Of Critical Issues	20 days	Mon 03/02/14	Fri 28/02/14
580	Meet With MBTA About Critical Issues	5 days	Mon 07/04/14	Fri 11/04/14
581	*Mechanical Facilities*	**30 days**	**Mon 03/03/14**	**Fri 11/04/14**
582	Initial Joint Audit And Review Of Critical Issues	25 days	Mon 03/03/14	Fri 04/04/14
583	Meet With MBTA About Critical Issues	5 days	Mon 07/04/14	Fri 11/04/14
584	Support Property Review	**106 days**	**Mon 03/02/14**	**Mon 30/06/1**
585	*Work Equipment*	**85 days**	**Mon 03/02/14**	**Fri 30/05/14**
586	Initial Joint Audit And Review Of Critical Issues	20 days	Mon 03/02/14	Fri 28/02/14
587	Meet With MBTA About Critical Issues	5 days	Mon 03/03/14	Fri 07/03/14
588	Vehicles Procurement	60 days	Mon 10/03/14	Fri 30/05/14
589	*Tools – Engineering*	**41 days**	**Mon 05/05/14**	**Mon 30/06/1**
590	Initial Joint Audit And Review Of Critical Issues	20 days	Mon 05/05/14	Fri 30/05/14
591	Critical Items List	10 days	Mon 12/05/14	Fri 23/05/14
592	Meet With MBTA About Critical Issues	5 days	Mon 26/05/14	Fri 30/05/14
593	Execute Priority Procurements	21 days	Mon 02/06/14	Mon 30/06/1
594	Support Inventory Review	**106 days**	**Mon 03/02/14**	**Mon 30/06/1**
595	*Spare Parts/Consumables/Capital Spares*	**41 days**	**Mon 05/05/14**	**Mon 30/06/1**
596	Initial Joint Audit And Review Of Critical Issues	20 days	Mon 05/05/14	Fri 30/05/14
597	Critical Items List	10 days	Mon 12/05/14	Fri 23/05/14
598	Meet With MBTA About Critical Issues	5 days	Mon 26/05/14	Fri 30/05/14
599	Execute Priority Procurements	21 days	Mon 02/06/14	Mon 30/06/1
600	*Supplies – Engineering*	**25 days**	**Mon 12/05/14**	**Fri 13/06/14**
601	Initial Joint Audit And Review Of Critical Issues	10 days	Mon 12/05/14	Fri 23/05/14
602	Critical Items List	5 days	Mon 19/05/14	Fri 23/05/14
603	Meet With MBTA About Critical Issues	5 days	Mon 26/05/14	Fri 30/05/14
604	Execute Priority Procurements	10 days	Mon 02/06/14	Fri 13/06/14
605	*Documentation - Engineering*	**10 days**	**Mon 03/02/14**	**Fri 14/02/14**
606	Initial Joint Audit And Review Of Critical Issues	10 days	Mon 03/02/14	Fri 14/02/14
607	Critical Items List	5 days	Mon 03/02/14	Fri 07/02/14
608	Meet With MBTA About Critical Issues	5 days	Mon 10/02/14	Fri 14/02/14
609	**C.9. Environmental Readiness**	**128 days**	**Wed 01/01/14**	**Fri 27/06/14**
610	*ODRL's*	**63 days**	**Wed 01/01/14**	**Fri 28/03/14**
611	Resumes For Two Full-Time Environmental Compliance Staff (3.8-001)	23 days	Wed 01/01/14	Fri 31/01/14
612	Draft Permit Management Program (3.8-002)	23 days	Wed 01/01/14	Fri 31/01/14
613	Monthly Compliance Summary Example Report (3.8-004)	23 days	Wed 01/01/14	Fri 31/01/14
614	Slug Control Plan & Pretreatment Report (3.8-039)	23 days	Wed 01/01/14	Fri 31/01/14
615	Draft Individual O&M Plans, Staffing Plans & Inspection Plans (3.8-020)	33 days	Wed 01/01/14	Fri 14/02/14
616	Oil/Water Separator (OWS) Spare Parts List & Inventory (3.8-024)	33 days	Wed 01/01/14	Fri 14/02/14
617	On-Site Disposal System Spare Parts List & Inventory (3.8-027)	33 days	Wed 01/01/14	Fri 14/02/14
618	Tank System Spare Parts List & Inventory (3.8-033)	33 days	Wed 01/01/14	Fri 14/02/14

Projet : Boston Mob5
Date : Mon 05/08/13

Tâche · Fractionnement · Jalon · Récapitulative · Récapitulatif du projet · Tâches externes · Jalons externes · Tâche inactive · Jalon inactif · Récapitulatif inactif · Tâche manuelle · Durée uniquement · Report récapitulatif manuel · Récapitulatif manuel · Début uniquement · Fin uniquement · Échéance · Avancement

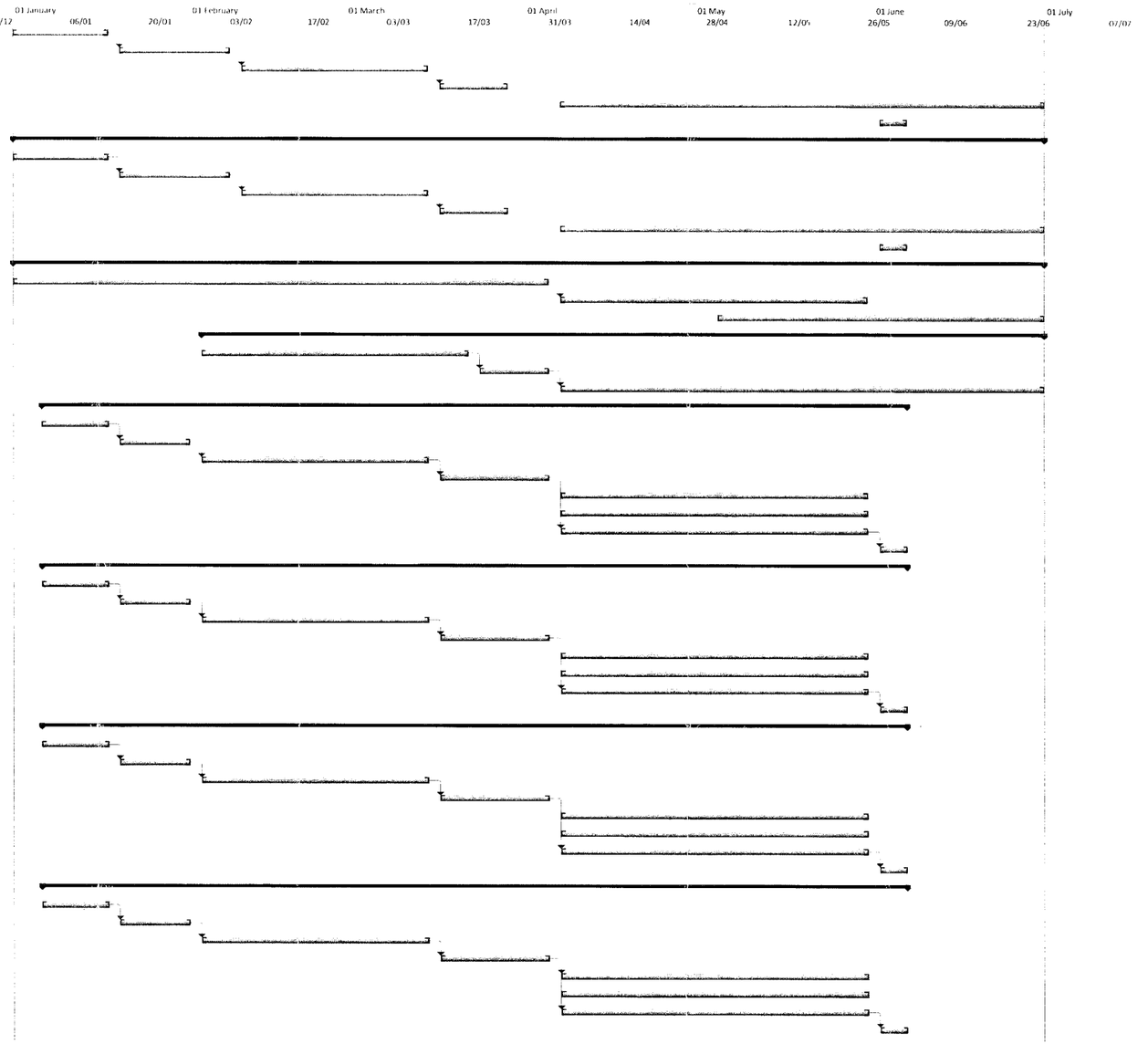
ID	Task Name	Duration	Start	Finish
619	Draft CRMF O&M Manual, Sops & Staffing Plan (3.8-037)	33 days	Wed 01/01/14	Fri 14/02/14
620	CRMF Wastewater System Spare Parts List & Inventory (3.8-040)	33 days	Wed 01/01/14	Fri 14/02/14
621	Draft Widett O&M Manual, Sops & Staffing Plan (3.8-042)	33 days	Wed 01/01/14	Fri 14/02/14
622	Widett Wastewater System Spare Parts List & Inventory (3.8-044)	33 days	Wed 01/01/14	Fri 14/02/14
623	Draft Emergency Spill Response/Spill Prevention Control And Countermeasure (SPCC) Plan (3.8-007)	43 days	Wed 01/01/14	Fri 28/02/14
624	Draft Hazardous Materials Management Plan (3.8-011)	43 days	Wed 01/01/14	Fri 28/02/14
625	Draft Environmental Services Work Plan (3.8-014)	43 days	Wed 01/01/14	Fri 28/02/14
626	Final Permit Management Program (3.8-003)	63 days	Wed 01/01/14	Fri 28/03/14
627	Final Emergency Spill Response / Spill Prevention Control And Countermeasure (SPCC) Plan (3.8-008)	63 days	Wed 01/01/14	Fri 28/03/14
628	Final Hazardous Materials Management Plan (3.8-012)	20 days	Mon 03/03/14	Fri 28/03/14
629	Final Environmental Services Work Plan (3.8-015)	20 days	Mon 03/03/14	Fri 28/03/14
630	Health & Safety Plan (3.8-018)	63 days	Wed 01/01/14	Fri 28/03/14
631	*Other Environmental Preparation*	**128 days**	**Wed 01/01/14**	**Fri 27/06/14**
632	Meetings With Contractors Environmental Services Delivery	8 days	Wed 01/01/14	Fri 10/01/14
633	Identification Of Contractor Personnel And Confirmation Of Licenses	8 days	Wed 01/01/14	Fri 10/01/14
634	Identification Of Wastewater Treatment Facilities Personnel	8 days	Wed 01/01/14	Fri 10/01/14
635	Meetings With Current Operator For System Status, Updates, Incident Reports	128 days	Wed 01/01/14	Fri 27/06/14
636	Meetings With Current Operator And Current Operator Contractors, Updates/Inventory Changes	128 days	Wed 01/01/14	Fri 27/06/14
637	Environmental Services Manager Reviews All Licenses, Permits, Certificates	5 days	Mon 06/01/14	Fri 10/01/14
638	Inventory Of Licenses, Permits, Certificates Confirmed/Updated In IT System	5 days	Mon 06/01/14	Fri 10/01/14
639	Audit Of CRMF Wastewater Pretreatment Facility	33 days	Wed 01/01/14	Fri 14/02/14
640	Audit Of Widett Terminal Wastewater Treatment And Reuse Facility	33 days	Wed 01/01/14	Fri 14/02/14
641	Audits Of Tank Systems	33 days	Wed 01/01/14	Fri 14/02/14
642	Audit Of Onsite Subsurface Disposal Systems	33 days	Wed 01/01/14	Fri 14/02/14
643	Audit Of Oil/Water Separator Systems	33 days	Wed 01/01/14	Fri 14/02/14
644	Audit Of All Stormwater And Catchbasins	33 days	Wed 01/01/14	Fri 14/02/14
645	Audit Of Buildings	33 days	Wed 01/01/14	Fri 14/02/14
646	Report Of Audit Results To MBTA	5 days	Mon 10/02/14	Fri 14/02/14
647	Plan For Prioritizing Remedial Actions Identified During Audits	43 days	Wed 01/01/14	Fri 28/02/14
648	Inventory And Development Of Spare Parts List For Oil/Water Separator Systems	33 days	Wed 01/01/14	Fri 14/02/14
649	Inventory And Development Of Spare Parts List For Onsite Subsurface Disposal Systems	33 days	Wed 01/01/14	Fri 14/02/14
650	Inventory And Development Of Spare Parts List For Tank Systems	33 days	Wed 01/01/14	Fri 14/02/14
651	Inventory And Development Of Spare Parts List For Widett	33 days	Wed 01/01/14	Fri 14/02/14
652	Inventory And Development Of Spare Parts List For CRMF	33 days	Wed 01/01/14	Fri 14/02/14
653	Contractor Procurements Of Required Spares Inventory	65 days	Mon 10/02/14	Fri 09/05/14
654	Readiness Assessments Of Contractors	20 days	Mon 19/05/14	Fri 13/06/14
655	Final Review Of All Plans	20 days	Mon 19/05/14	Fri 13/06/14
656	*It Systems*	**10 days**	**Mon 06/01/14**	**Fri 17/01/14**
657	Inventory Of IT Systems Used By Environmental Services	10 days	Mon 06/01/14	Fri 17/01/14
658	Review And Update Of Permitting/License/Certificate Record And Renewal System	5 days	Mon 13/01/14	Fri 17/01/14
659	Review And Assessment Of Current GIS System	10 days	Mon 06/01/14	Fri 17/01/14
660	Recommendations For IT Development	5 days	Mon 13/01/14	Fri 17/01/14
661	**C.10. Safety/Regulatory/Security Readiness**	**129 days**	**Wed 01/01/14**	**Mon 30/06/1**
662	*ODRL's*	**88 days**	**Wed 01/01/14**	**Fri 02/05/14**
663	Safety Incident Reporting & Review Process (3.5-001)	43 days	Wed 01/01/14	Fri 28/02/14
664	Emergency Action Process Improvement Plan (3.5-002)	43 days	Wed 01/01/14	Fri 28/02/14
665	Contingency Plan (3.5-019)	43 days	Wed 01/01/14	Fri 28/02/14
666	Operator System Safety Compliance Plan (3.5-003)	68 days	Wed 01/01/14	Fri 04/04/14
667	Operator System Security Compliance Plan (3.5-012)	68 days	Wed 01/01/14	Fri 04/04/14
668	Emergency Preparedness Plan (3.5-015)	68 days	Wed 01/01/14	Fri 04/04/14
669	Emergency Response Plan (3.5-017)	68 days	Wed 01/01/14	Fri 04/04/14
670	Drug Free Workplace Policy (3.5-022)	68 days	Wed 01/01/14	Fri 04/04/14
671	Drug & Alcohol Test Guidelines (3.5-027)	88 days	Wed 01/01/14	Fri 02/05/14
672	Inventory Of Safety Sensitive Positions (3.5-029)	3 days	Wed 01/01/14	Fri 03/01/14
673	*Safety - Safety Training And Documentation*	**129 days**	**Wed 01/01/14**	**Mon 30/06/1**
674	Review & Analyze Policies & Procedures	13 days	Wed 01/01/14	Fri 17/01/14
675	Incorporate Own Policies & Procedures	15 days	Mon 20/01/14	Fri 07/02/14
676	Develop Draft Program	25 days	Mon 10/02/14	Fri 14/03/14
677	Review With The MBTA	10 days	Mon 17/03/14	Fri 28/03/14
678	Revise & Finalize Plan	61 days	Mon 07/04/14	Mon 30/06/1
679	Program Ready For Implementation	5 days	Mon 02/06/14	Fri 06/06/14
680	*Safety - Hazard Identification*	**129 days**	**Wed 01/01/14**	**Mon 30/06/1**



Projet : Boston Mob5
Date : Mon 05/08/13

Tâche · Fractionnement · Jalon · Récapitulative · Récapitulatif du projet · Tâches externes · Jalons externes · Tâche inactive · Jalon inactif · Récapitulatif inactif · Tâche manuelle · Durée uniquement · Report récapitulatif manuel · Récapitulatif manuel · Début uniquement · Fin uniquement · Échéance · Avancement

ID	Task Name	Duration	Start	Finish
681	Review & Analyze Policies & Procedures	13 days	Wed 01/01/14	Fri 17/01/14
682	Incorporate Own Policies & Procedures	15 days	Mon 20/01/14	Fri 07/02/14
683	Develop Draft Program	25 days	Mon 10/02/14	Fri 14/03/14
684	Review With The MBTA	10 days	Mon 17/03/14	Fri 28/03/14
685	Revise & Finalize Plan	61 days	Mon 07/04/14	Mon 30/06/14
686	Program Ready For Implementation	5 days	Mon 02/06/14	Fri 06/06/14
687	*Safety - Accident/Incident Investigation*	**129 days**	**Wed 01/01/14**	**Mon 30/06/14**
688	Review & Analyze Policies & Procedures	13 days	Wed 01/01/14	Fri 17/01/14
689	Incorporate Own Policies & Procedures	15 days	Mon 20/01/14	Fri 07/02/14
690	Develop Draft Program	25 days	Mon 10/02/14	Fri 14/03/14
691	Review With The MBTA	10 days	Mon 17/03/14	Fri 28/03/14
692	Revise & Finalize Plan	61 days	Mon 07/04/14	Mon 30/06/14
693	Program Ready For Implementation	5 days	Mon 02/06/14	Fri 06/06/14
694	*Safety - Regulatory Requirements*	**129 days**	**Wed 01/01/14**	**Mon 30/06/14**
695	Develop Parts 213, 214, 217, 218, 219, 220, 225, 227, 228, 229 - 232, 233 - 236, 238, 239, 240, 242	68 days	Wed 01/01/14	Fri 04/04/14
696	Submit FRA Programs For The FRA And The MBTA Approval	40 days	Mon 07/04/14	Fri 30/05/14
697	Program Ready For Implementation	41 days	Mon 05/05/14	Mon 30/06/14
698	*Safety - Arthur D. Little Audit*	**106 days**	**Mon 03/02/14**	**Mon 30/06/14**
699	Develop Program Preparation	35 days	Mon 03/02/14	Fri 21/03/14
700	Review Program With The MBTA	10 days	Mon 24/03/14	Fri 04/04/14
701	Implement Program	61 days	Mon 07/04/14	Mon 30/06/14
702	*Security - Facilities*	**110 days**	**Mon 06/01/14**	**Fri 06/06/14**
703	Review & Analyze Policies & Procedures	10 days	Mon 06/01/14	Fri 17/01/14
704	Incorporate Own Policies & Procedures	10 days	Mon 20/01/14	Fri 31/01/14
705	Develop Draft Program	30 days	Mon 03/02/14	Fri 14/03/14
706	Review With The MBTA	15 days	Mon 17/03/14	Fri 04/04/14
707	Revise & Finalize Plan	40 days	Mon 07/04/14	Fri 30/05/14
708	Procure Program Components	40 days	Mon 07/04/14	Fri 30/05/14
709	Develop Liaison With The MBTA Police & Other Agencies	40 days	Mon 07/04/14	Fri 30/05/14
710	Program Ready For Implementation	5 days	Mon 02/06/14	Fri 06/06/14
711	*Security - Employee Identification Badge System*	**110 days**	**Mon 06/01/14**	**Fri 06/06/14**
712	Review & Analyze Policies & Procedures	10 days	Mon 06/01/14	Fri 17/01/14
713	Incorporate Own Policies & Procedures	10 days	Mon 20/01/14	Fri 31/01/14
714	Develop Draft Program	30 days	Mon 03/02/14	Fri 14/03/14
715	Review With The MBTA	15 days	Mon 17/03/14	Fri 04/04/14
716	Revise & Finalize Plan	40 days	Mon 07/04/14	Fri 30/05/14
717	Procure Program Components	40 days	Mon 07/04/14	Fri 30/05/14
718	Develop Liaison With The MBTA Police & Other Agencies	40 days	Mon 07/04/14	Fri 30/05/14
719	Program Ready For Implementation	5 days	Mon 02/06/14	Fri 06/06/14
720	*Security - Vehicle Control Program*	**110 days**	**Mon 06/01/14**	**Fri 06/06/14**
721	Review & Analyze Policies & Procedures	10 days	Mon 06/01/14	Fri 17/01/14
722	Incorporate Own Policies & Procedures	10 days	Mon 20/01/14	Fri 31/01/14
723	Develop Draft Program	30 days	Mon 03/02/14	Fri 14/03/14
724	Review With The MBTA	15 days	Mon 17/03/14	Fri 04/04/14
725	Revise & Finalize Plan	40 days	Mon 07/04/14	Fri 30/05/14
726	Procure Program Components	40 days	Mon 07/04/14	Fri 30/05/14
727	Develop Liaison With The MBTA Police & Other Agencies	40 days	Mon 07/04/14	Fri 30/05/14
728	Program Ready For Implementation	5 days	Mon 02/06/14	Fri 06/06/14
729	*Security - Restricted Access Program*	**110 days**	**Mon 06/01/14**	**Fri 06/06/14**
730	Review & Analyze Policies & Procedures	10 days	Mon 06/01/14	Fri 17/01/14
731	Incorporate Own Policies & Procedures	10 days	Mon 20/01/14	Fri 31/01/14
732	Develop Draft Program	30 days	Mon 03/02/14	Fri 14/03/14
733	Review With The MBTA	15 days	Mon 17/03/14	Fri 04/04/14
734	Revise & Finalize Plan	40 days	Mon 07/04/14	Fri 30/05/14
735	Procure Program Components	40 days	Mon 07/04/14	Fri 30/05/14
736	Develop Liaison With The MBTA Police & Other Agencies	40 days	Mon 07/04/14	Fri 30/05/14
737	Program Ready For Implementation	5 days	Mon 02/06/14	Fri 06/06/14



Projet : Boston Mob5
Date : Mon 05/08/13

Tâche | Fractionnement | Jalon | Récapitulative | Récapitulatif du projet | Tâches externes | Jalons externes | Tâche inactive | Jalon inactif | Recapitulatif inactif | Tâche manuelle | Durée uniquement | Report récapitulatif manuel | Récapitulatif manuel | Début uniquement | Fin uniquement | Échéance | Avancement

Page 12

12.A.10. Plans and Procedures for Ensuring Full Implementation of the Commuter Rail IT Environment by the Agreement Services Commencement Date

We will work to establish a strategic vision for the Commuter Rail IT Environment (CRITE). As with all strategic planning, a baseline representing existing systems, networks, databases, and applications will be established. Specialists in each of the critical areas will begin the process of documenting all the aspects of the existing CRITE and develop all the needed diagrams. Concurrently, procurement will begin the replacement of equipment that is beyond its useful life or not supported anymore. We have already initiated the process with hardware and software OEMs to obtain quotations for, hardware and software, installation services and support agreements. Server software will also be upgraded to current revision level as part of this procurement.

We believe that some required elements and systems were not identified in the MBTA documentation, namely Human Resources, Financial, and ERP solutions. We will work with the MBTA to ensure systems supporting the Human Resources, payroll and finance processes are transferred at commencement of service. If the systems in question are not available, we will deploy our own suite of solutions to support those processes.

We recognize that above all the continuity of IT service must be maintained throughout Mobilization and that as such, as the new IT system is put into operation, it must operate in parallel to existing systems until such time that it is determined that older systems can be phased out with no adverse effect and with full continuity and functionality of service.

We will provision new IT systems that include the Issue Tracking Portal and RFID tracking and ticketing systems and will integrate those within the baseline IT environment. As an SaaS (Cloud) solution, the ITP based on ServiceNow Service Desk will be highly cost efficient. We and the MBTA will be able to use this scalable and flexible solution in a modular fashion, thus avoiding high capital expenditures and operational costs.

We have determined by way of the KPMG audit that many key infrastructure components (servers, networking equipment, server software, etc.) are either about to schedule off warranty or are not currently under warranty. The risk inherent in running an IT Environment under these conditions is extremely high and to mitigate risks, critical infrastructure systems should be replaced. We have determined through laptop express service numbers that by July 2014, 80% of existing laptops will need to be replaced. The software on all desktop systems is currently at older revisions and will need to be replaced. By way of extrapolation we can assume that at least 80% of the CRITE will need to be replaced or upgraded by Commencement Date.

During Mobilization and under the CIO's guidance, who will be on site at NTP, we will provide a variety of expertise that will include but be not limited to:

- IT Planning Team to develop detailed plans, oversee execution, and monitor the mobilization progress under the General Manager's direction
- IT diagnostic and inventory teams to establish and confirm knowledge of existing system
- System Integrators to assist with implementation and integration of the ServiceNow ITP platform and the RIFD tracking and ticketing system
- Network Engineers to work to assure and enhance network design and operations and establish network monitoring
- System and Network Architect to design and monitor system implementation
- Senior Application Programmers to document application interfaces and assist with integration efforts between the baseline IT environment and our provisioned environments

- Vendor/Supplier personnel to install infrastructure systems and networking

The tasks to be performed by us during Mobilization are highlighted below and grouped by streams:

Diagnostics and Planning

- Use available diagnostic information and perform a high-level system diagnostic/ inventory to document all computer systems, networking systems, applications, interfaces and databases
- Review and evaluate all software and hardware systems, databases, licenses, maintenance and support agreements and warranties
- Review and revise the system migration plan and adjust based on the diagnostic
- Elaborate the IT Operations and Maintenance Cost Plan

IT Organization

- CIO to lead the IT transition
- Recruit missing IT resources to complete the target IT organization
- CIO to establish the IT Steering Committee, the Change Control Board and In Process Review - Operations and Projects group

IT Infrastructure Transition and Procurement

- Transition MBTA existing IT infrastructure and procure and configure our office IT environment including installation of servers, network, PCs/desktop systems, VOIP telephone system (which will also support the Customer Services operation), configuration of all systems with all required software, testing of all systems and network, and system launch
- Procure and configure, test and implement parallel (to existing MBTA IT infrastructure) network equipment, network communications software and the VM system server environment that will replace the existing system, which will no longer be within the premium software support life cycle
- Replace aged VM system hardware and software to ensure high level of support services required of mission-critical systems
- Install all existing applications on the new VM platform without affecting the existing environment. All applications are to be installed tested and benchmarked to ensure proper performance before the new system replaces the old.
- Procure and configure laptops for new staff and produce a plan to replace the laptops for existing staff after Mobilization
- Review current IT maintenance/warranty position contracts and procure extensions as necessary

New Solutions Implementation

- Procure, configure and implement the Interactive Voice Response system. This system will deliver inbound and outbound messages, surveys, text messages and up-to-date account information instantly and easily without having to speak directly to a person. IVR technology is also used to gather information, as in the case of telephone surveys, in which the user is prompted to answer questions by pushing the numbers on a touch-tone telephone.
- Procure the Issue Tracking Portal (ITP) solution "ServiceNow". Configure and implement the ITP and integrate with the new Commuter Rail IT Environment, including all mission-critical and mission support applications.
- Procure, configure and implement the Radio Frequency Identification (RFID) technology and scanning capabilities. Explore integration with the Maintenance Management system for generation of work orders in common format and using the same data source.

Integration

- Develop, test and implement interfaces to applicable existing IT environment applications
- Develop, test and implement interfaces between the ITP and the RFID scanning solution

Governance

- Transition and communicate existing MBTA policies and procedures
- Normalize and adapt to MBTA needs all IT policies and procedures for security, use of standards and best practices in technology, project management, IT Change Control, new software testing, moving software into the production environment, database maintenance and best practices, system migration plan and Quality Assurance and Quality Control
- CIO to manage the issue escalation process for IT Service Level Agreements. An internal process defining expected actions, reports and reviews will be developed as part of the IT workstream's policies and procedures. A log of open issues will be maintained at all times and available on an ITP dashboard. The escalation process policies and procedures will be developed during Mobilization.

Transition of Baseline IT Environment to the New Infrastructure

- Transfer the IT baseline environment to the new IT infrastructure; perform database optimization and maintenance test for existing systems/interfaces.
- Perform system tests, review all tests prior to move to the production environment, benchmark performance against the old environment, and deploy into the production environment.

Knowledge Management and Collaboration

- Develop our Intranet for use by us and the MBTA for internal website, access to the Digital Repository, and access to the Issue Tracking Portal
- Develop indexing and management plan for the Digital Repository
- Gather documentation and provide to MBTA all information as well as access to documents used in enabling/transitioning the IT environment
- Transition existing system diagrams, network topology diagrams, and database access diagrams, and document the new IT environment configuration

Business Transition Support and Integration with IT Transition

- Coordinate efforts with all workstreams and supplement ongoing IT support to enable their plans including Materials Management, Mechanical Services, RFID, Transportation Services, Management, Safety, and Customer Services, especially as they relate to the Issue Tracking Portal

Training

- Develop training plans for IT personnel to enable an effective support of all components of the Commuter Rail IT Environment

12.B. Mobilization Price Form

The Mobilization Price Form as well as narrative text to back up the pricing included in the Form are included in Binder 2.

12.C. Best Practices Support

The underlying fundamental principle that we feel will be most beneficial to the MBTA Service is that of partnership, a close working relationship between the MBTA and its operator to improve the service, improve the system, increase productivity and better utilize and preserve the assets that the MBTA has dedicated to this service. This is the primary concept, which will become a working reality that we will bring to the service and our contractual relationship with the MBTA.

The innovative methods and techniques described in this section cover a wide variety of operational aspects including smarter ways to manage the day to day business, creating efficiencies and cost savings and using successful methods from other projects for the benefit of the MBTA and the MBTA's customers.

Our initiatives for ensuring a safe, seamless, on time and on budget Mobilization of the MBTA Service have been described in detail in this Plan, and are summarized in the table below:

Our Mobilization Opportunity Initiatives					
Initiative	**Innovative**	**Best Practice**	**Beneficial to MBTA Customers**	**Cost Efficient**	**Support**
Mobilization Office/Staff Support	✓		✓	✓	Section 12.A.10
• Have *all* key managers on site at NTP		✓	✓	✓	Section 12.A.4.
• Set up an office near incumbent's					Section 12.A.4.
• Have a Steering Committee at NTP; set up peer technical committees comprised of experts at NTP	✓	✓	✓	✓	
• Have peers assist with Joint Audit					
Community Outreach					Admin./ Finance Readiness section: Community Outreach
• Set up Focus groups					
• Conduct Operation Lifesaver and educational outreach programs	✓	✓	✓	✓	
• Meeting with Community leaders					
• Meeting with Community Colleges					
Personnel Recruitment / Training					Sections 12.A.2. and 12.A.3.
• Use of best practice recruitment process in all hiring activities					
• Test all employees to ensure a safe transition					
• Create diverse hiring committees					
• Partner with recruiting firms and trade union organizations					
• Use corporate resources to conduct orientation sessions/road shows	✓	✓	✓	✓	
• Set up various means of communication and gather feedback					
• Conduct On-Board Management Workshops					
• Offer support to employees who decide not to join KCS					
• Exceed Training requirements					
• Order uniforms					
Administration/Finance					Admin./ Finance Readiness section
• Run a parallel payroll system	✓	✓	✓	✓	
Materials Management					Materials Management Readiness
• Try to use/upgrade existing Systems	✓	✓	✓	✓	
Information Technology					IT Readiness section
• Start integration to a highly secure Cloud system	✓	✓	✓	✓	
• Hold off for installation to use permanent staff					

Our Mobilization Opportunity Initiatives					
Initiative	**Innovative**	**Best Practice**	**Beneficial to MBTA Customers**	**Cost Efficient**	**Support**
Quality Assurance • Engage consultant to perform assessment • Set up KPI's and other performance tools	✓	✓	✓	✓	Quality Assurance Readiness section
Transportation Services • Deploy our simulator at *own cost - a $680k saving for the MBTA*	✓	✓	✓	✓	Transportation Readiness section
Customer Service • Develop customer service satisfaction surveys • Conduct customer outreach program	✓	✓	✓	✓	Customer Service Readiness section
Mechanical Services • Preparation for Lean Management	✓	✓	✓	✓	Mechanical Services Readiness section
Engineering Services • Purchase non-revenue vehicles to become part of the fleet	✓	✓	✓	✓	Engineering Services Readiness section
Environmental Services • Engage consultant to perform assessment	✓	✓	✓	✓	Environmental Readiness section
Safety/Regulatory/Security • Engage Arthur D. Little consultant to perform assessment • Establish close liaison with the MBTA Police and prepare for the implementation of a comprehensive safety/security training for key managers	✓	✓	✓	✓	Safety Readiness section

Figure 12-4: Our Mobilization Opportunity Initiatives